



DESFIL

Development Strategies for Fragile Lands

90450

**MIDTERM EVALUATION OF THE
FOREST RESOURCES FOR A STABLE ENVIRONMENT PROJECT
(FORESTA)**

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LIST OF ACRONYMS

ACCVC	Area of Conservation for the Cordillera Volcanic Central
CACSA	Sarapiquí Cantonal Agriculture Center
CACSI	Siquirres Cantonal Agriculture Center
CATIE	Central American Institute for Agricultural Research and Education
CDIE	USAID/W Center for Development Information and Evaluation
DESFIL	Development Strategies for Fragile Lands Project USAID/W/G/NR
DGF	General Directorate of Forestry
EOP	End of Project
FORESTA	Forest Resources for a Stable Environment Project
FUNDECOR	Foundation for the Development of the Central Volcanic Cordillera
GOCR	Government of Costa Rica
INBio	National Institute for Biodiversity
ITCR	Costa Rican Institute for Technology
MIRENEM	Ministry of Natural Resources, Energy, and Mines
NGO	Nongovernment Organization
OTS	Organization for Tropical Studies
PACD	Project Anticipated Completion Date
RENARM	Regional Environmental and Natural Resource Management Project
ROCAP	USAID Central American Programs
SPN	National Park Service
TAB	Technical Advisory Board
USAID	U.S. Agency for International Development

EXECUTIVE SUMMARY

A. Background

A1. The Project Setting

The natural resource base of much of Central America is rapidly eroding and environmental problems are increasing in kind and severity. The capacity of the region to meet human needs and aspirations on a sustainable basis is declining and per capita productivity and incomes are stagnating or diminishing.

Inequitable access to natural resources and economic opportunity, land speculation, poor land use, high demand for tropical timber, inappropriate policies, and inadequate government response are the major causes of resource degradation, environmental deterioration, and the detrimental impact on the quality of human life.

Within this regional context, Costa Rica is an anomaly, with generally less human population pressure on the landscape and its resources, stronger government institutions, a relatively long history of democratic governance and political stability, and more trained personnel.

Nevertheless, basic human needs are not being met adequately on a national basis and poverty persists in many rural and urban areas. Furthermore, Costa Rica has one of the world's highest rates of deforestation outside of its protected areas. Deforestation has caused soil erosion, water supply reduction, accelerated siltation and sedimentation, and the loss of wildlife habitats. Due to the exceptionally high degree of biodiversity in Costa Rican forest habitats, the actual and potential loss of innumerable species is a major concern.

During the 1980s Costa Rica underwent major structural changes in the economy and was severely affected by the international debt crisis. The conventional government structures were not adequately addressing the mounting problems and the existing nongovernmental structure was not sufficiently equipped.

The high rate of deforestation and associated land and natural resource degradation compromise the ability of Costa Rica to achieve and maintain sustainable development, and there are serious concerns that the socioeconomic and environmental gains that the country has achieved could be rapidly lost.

The consequences of such significant developments culminated with the unanimous need to conceptualize new resource management strategies and institutions. From these special situations, the Forest Resources for a Stable Environment (FORESTA) project was conceptualized.

A2. The FORESTA Project

The U.S. Agency for International Development (USAID) Mission in Costa Rica approved the FORESTA Project Paper on April 10, 1989. The mission and the Government of Costa Rica (GOCR) signed the Technical Agreement shortly thereafter. USAID contracted Price Waterhouse to assist in establishing the Foundation for the Development of the Central Volcanic Cordillera (FUNDECOR)—a private nongovernmental foundation with a government-appointed board—to execute FORESTA. The Cooperative Agreement to permit FUNDECOR to implement the FORESTA project in close collaboration with the Ministry of Natural Resources, Energy, and Mines (MIRENEM) was not signed until June 1991. A Project Anticipated Completion Date (PACD) of March 31, 1996 was established, reducing the original seven-year life of project to less than five years. The PACD now falls just before the closure of the USAID mission in Costa Rica.

The project provides for combined resources totaling \$22.5 million, including \$7.5 million from USAID and the equivalent of \$15.0 million in local currency from the GOCR. The project provides for the creation of a \$10 million endowment fund (the major portion of the GOCR contribution); the interest on this endowment is expected to provide the core operating costs of FUNDECOR upon FORESTA's completion date.

The FORESTA project focuses on the Area de Conservación de la Cordillera Volcánica Central (ACCVC)—the central volcanic highlands of Costa Rica. The ACCVC is a critical ecological region and economic zone for the development of the Central Valley and is adjacent to the major urban centers, including the capital city of San José. It is the major source of water, for example, for a majority of the population.

A3. Goal and Purpose of FORESTA

According to the Project Paper, the goal of the project is "to support Costa Rica's long-term economic development by conserving and developing its renewable natural resources upon which sustainable economic growth depends."

The purpose is "to develop forestry and agroforestry as economically and ecologically appropriate land uses in the buffer zones around the Braulio Carrillo, Poás, and Irazú National Parks and other natural protected areas of the Central Cordillera, and to support management of these protected areas. This is to be accomplished by supporting the development of an independent private foundation [FUNDECOR] which has been created to provide direction, technical assistance, coordination and funding to (a) improve the management of the national parks and other natural protected areas in the project area (ACCVC), (b) promote the sustainable management and production of the natural forests of the buffer zone around the parks, and (c) assist the residents of the area to improve their land by integrating trees into their farming systems."

According to the bilateral assistance agreement (1989), FORESTA would "help to improve the management and use of Costa Rica's protected areas and of the buffer zones surrounding them through improved land use management and planning, enhanced integrated

forest industry, and expanded community awareness and participation in the Central Cordillera."

The mission of FUNDECOR, the implementing institution, is the "conservation, development, and sustainable use of the natural and cultural resources of the ACCVC."

The underlying philosophy of FORESTA is long-term sustainable development in a critically important ecological and economic region of Costa Rica. Particular emphasis is directed at conservation of forests and associated natural resources (biodiversity, soil, and water), as indicated by the title of the project, "Forest Resources for a Stable Environment."

A4. Objectives of the Evaluation

The objectives are twofold:

- To assess the progress toward achieving the FORESTA outputs as expressed in the Project Paper logical framework and the revised FUNDECOR logical framework of June 1993 to review the strengths and weaknesses of each and develop the most appropriate outputs to be achieved by FUNDECOR during the remaining project period.
- To assess the institutional development and implementation capability of FUNDECOR and to develop a set of threshold indicators that the mission may use to determine when FUNDECOR is institutionally mature to qualify for its local currency endowment.

B. Project Components of FORESTA

B1. General Operations

This component supports the establishment of FUNDECOR as executing institution capable of influencing natural resource management in the ACCVC, the development of an overall strategy for the ACCVC, improvement of the forest and park protection system, establishment of multi-use operations centers for forestry and park activities in strategic locations throughout the project area, and the development of an environmental education program. As part of the institutional development of FUNDECOR, the GOCR and USAID have created a \$10 million endowment fund to ensure the financing of FUNDECOR's core budget needs once the FORESTA project has ended.

B2. Management of Protected Areas

This component of FORESTA is designed to guide and support the management of the protected areas of the ACCVC to ensure the long-term stability of their ecological/biological values and to enhance the economic benefits derived from improved park management (chiefly visitor facilities and services) to local people.

The activities planned for this component include preparing management plans, marking protected area boundaries, purchasing private land through national and international fund-raising, improving visitor facilities and services, promoting nature-oriented tourism, and integrating local communities into protected area management activities.

B3. Management of Natural Forests for Production

This component includes assisting in the preparation and implementation of forest management plans by developing guidelines for all aspects of forest harvesting operations (tree selection, logging practices, road construction, and postharvest silvicultural treatments to promote natural regeneration and growth). It also includes support for contracts for applied research to test selective cutting and strip cutting systems and to improve forest management guidelines. Finally, it provides technical assistance and financial incentives for the establishment of one or more private forest enterprises.

B4. Integration of Trees on Farms

Through this component FUNDECOR will encourage reforestation and agroforestry on deforested lands and promote the participation of community and grassroots organizations in the conservation of the natural resources of the ACCVC.

FUNDECOR will also provide technical and material support for the establishment of communal, family, or commercial nurseries and ensure the availability of good quality seeds. It will arrange for short courses for tree planters and nursery operators and will contract two teams of extensionists to promote agroforestry.

FUNDECOR will include biological diversity and the creation of wildlife habitat among the criteria for selecting the species to be promoted in reforestation and agroforestry activities.

C. Assessment of Progress in FORESTA Components

C1. General Operations

The project has established FUNDECOR as a strong and respected institution with excellent management systems and exceptionally creative approaches to the conservation of the forests and associated resources of the ACCVC. The strategic management document is nearing completion. FUNDECOR has provided funds for the purchase of equipment for park protection activities and for the construction of operations centers in the field. Protection violations have increased but judicial actions languish. There are excellent collaborative relationships and contributions by MIRENEM and the National Park Service (SPN) and General Directorate of Forestry (DGF). A considerable amount of time was devoted to negotiations related to the endowment, but much remains to be done.

C2. Management of Protected Areas

FUNDECOR made significant changes in the logical framework of FORESTA that resulted in a much more manageable set of activities and more realistically achievable outputs. They also resulted in the reallocation of varying amounts of funds among different line-items.

The technical management and administration of national parks progressed admirably; there is a strong working relationship with the SPN in support of park planning, management, protection, and financial self-sufficiency for the parks; an integrated management plan for national parks is nearing completion; visitor facilities and services have been substantially improved; research plans covering biodiversity and cultural resources have been prepared; some initial collaboration with other institutions in research efforts and other activities has begun.

Innovative financial arrangements related to user fees and concessions for park facilities and services have created a trend toward self-financing for the national parks, which has rarely been achieved anywhere.

Current activities in training, environmental education, community participation, and field marking of critical park boundaries are progressing. However, additional focused work must be done to achieve PACD outputs and the broader FORESTA objectives.

C3. Management of Natural Forests for Production

Since the intensive program review of FORESTA by the board and staff of FUNDECOR in 1992, FUNDECOR has concentrated heavily on the management of natural forests. It is not surprising, therefore, that the most impressive achievements have been made in this component.

These achievements include the large amount of natural forest under a form of management that is probably sustainable, the preparation of logging guidelines, the streamlining with DGF of the procedures for preparing and approving management plans, and the sale of timber from managed forests through an innovative system of auctions.

FUNDECOR has, at least temporarily, abandoned attempts to develop an enterprise based on integrating timber harvesting and wood processing. They have, however, proposed an innovative enterprise based on ecotourism that would ensure that large tracts of forests are left intact and that many of the economic benefits of ecotourism would accrue to the owners of these tracts.

C4. Integration of Trees on Farms

FUNDECOR has taken innovative actions to implement this component. It is using Organization for Tropical Studies (OTS) research to develop a native species planting program and has an agreement with OTS to select and test seed trees, pay seed tree owners

to protect their trees, and collect seeds. Other activities include technical and financial support for fledgling nursery businesses, collaborative arrangements with local organizations for reforestation, and assisting landowners in arranging for reforestation and obtaining DGF approval and subsidies.

Little progress, however, has been made toward achieving the broader objectives of the component through other activities related to the reforestation of land not capable of sustaining agricultural production, the introduction of agroforestry on a growing number of farms and ranches, and the participation of a significant percentage of the ACCVC residents in activities to incorporate trees on farms and other deforested areas.

FUNDECOR's accomplishments in organizing landowners and other residents of the zone to develop the native species reforestation program are impressive. However, even though FUNDECOR has established good collaborative relationships with several community organizations, it is the evaluation team's view that a systematic program activity, similar to what is observed in other FUNDECOR activities, is now needed to help facilitate broader conservation and improved land use practices.

D. Overview Assessment of FUNDECOR

A broader review is now needed to judge progress towards achieving project purpose.

Given the major challenges FUNDECOR leadership initially encountered, the evaluation team was impressed with the extremely quick fashion in which a professional organization was created and set about doing very innovative, business-oriented, and cost-effective activities in the ACCVC. FUNDECOR has well-trained and highly qualified staff to carry out its natural resource conservation activities. The high level of executive leadership resonates throughout the organization, which is precisely why FUNDECOR is so effective in project implementation in the field. The new GOCR is already learning much from FUNDECOR as it pursues its aggressive pro-conservation agenda.

FUNDECOR is also characterized by a high level of imagination and creativity in project design and problem solving. The methods and techniques used in managing natural forests for production are among the best and most innovative that the evaluation team has observed in tropical forestry. The methodology used to define "critical ecological areas" is indicative of the skills and intellectual rigor within the institution. The "Eco-Camps" proposal, which will ensure that large forested areas are left intact and that local forest landowners will benefit, is a truly innovative form of ecotourism not observed elsewhere.

Although these are undeniably significant accomplishments, particularly in light of what we now know about programs with similar objectives, these same achievements must be put in light of what the designers viewed as the major outcome of the FORESTA experience. They concluded that "the most important accomplishment of the project will be the strengthening of FUNDECOR to become a permanent self-sustaining private organization primarily responsible for the control and use of the natural resources of the ACCVC." To best achieve this objective, the evaluation team strongly believes that a select number of

targeted efforts must be quickly mobilized to generate a secure financial base. While an endowment will create the important core structure, FORESTA objectives and the daunting challenges observed throughout the ACCVC require that a series of selected activities be pursued.

The recommendations listed below are designed to help establish the financial base for a sustainable institution and stimulate the development of a series of targeted strategies more directly compatible with the broader FORESTA objective. We based these recommendations on budget calculations that indicate that sufficient resources exist to initiate some of the proposed activities described in Section VII of this evaluation. This approach will also generate more interest by numerous donors, research centers, PVOs, businesses, etc. The team is concerned that unless significant progress is soon made, a unique opportunity to truly re-establish the permanent structure for achieving FUNDECOR's mission statement will have been lost.

E. Recommendations

The recommendations of the evaluation team are treated in two categories: (1) highest priority activities and (2) strengthening of existing outputs: new outputs. A reduced number of outputs from the original project paper and the FUNDECOR strategy document is noted.

E1. Highest Priority Activities

- That FUNDECOR continue to collaborate in discussions and negotiations with USAID and GOCR to finalize details to transfer the endowment to FUNDECOR.
- That FUNDECOR begin to engage seriously in the search for long-term project funding through the preparation of proposals, the formation of institutional partnerships for joint ventures, and networking in national and international donor circles.
- That FUNDECOR take a leadership role in the preparation and implementation of a comprehensive, integrated research program with institutional partners in support of sustainable development activities within the ACCVC, focusing on conservation, management, and monitoring.
- That FUNDECOR prepare and begin to implement a long-term training and staff development program for FORESTA personnel—from the board to the park ranger and the small forest manager in the field.
- That FUNDECOR and its public and private sector collaborators develop and begin the implementation of a strategy and program for community participation in FORESTA activities in the field and for environmental education.

- That FUNDECOR hire or seek to have assigned three staff members to take lead responsibility for these priority activities, including a fund-raiser/marketing expert, a research and training coordinator, and a social scientist in community participation/social marketing/environmental education.

E2. Strengthening of Existing Outputs: New Outputs

- **Global operations.** Strategic planning for FUNDECOR operations beyond the PACD, creation of a technical advisory board (TAB), improved forest protection system.
- **Management of protected areas.** Consolidation of park management plans, increased marking of park boundaries in the field, strategy for exploiting area's cultural resources.
- **Management of natural forests for production.** A system for continual improvement of forest management standards and logging guidelines, maintain projected levels for both natural forests under management plans, development of forest-based enterprises—including "Eco-Camps," research and monitoring of management impacts.
- **Integration of trees on farms.** Native tree plantations, community organization, agroforestry, and secondary strategic plan.

F. Conclusions and a Special Opportunity for USAID

Significant priority activities and strengthened outputs have been indicated as essential targets towards achieving the project purpose. These recommendations should be viewed by FUNDECOR and USAID in a very positive and constructive light. FUNDECOR will also likely serve as a model for other conservation and development activities elsewhere. There is great potential and the lessons and approaches developed in Costa Rica should have applications to other areas, other donors, and to the broad nongovernmental organization (NGO) community.

It is the team's conclusion that during the next two-years, a time when mission staff resources will further erode, USAID should give special sustained and systematic support to FUNDECOR. A critical transition period during which FUNDECOR must prepare for the post-USAID era is now underway. Guidance and support, along with targeted assistance to make the smoothest and most productive transition, is needed. This is still a somewhat fragile structure and USAID guidance and assistance will be critical. Unfortunately, examples of successful institution building projects of less than five years are rare; we know of none.

While we recommend that USAID treat this project in the best light possible, we recognize that staff resources are declining. We have suggested USAID/W and USAID/ROCAP-based projects that might be mobilized to provide special assistance now and

beyond the PACD. FUNDECOR has brought outstanding creativity to the task of linking conservation and development, the two essential elements of any sustainable development strategy. Much is at stake and the hope is that this special experience is appropriately supported during a critical period.

SECTION I INTRODUCTION

This section provides an overview discussion for this comprehensive assessment of the Forest Resources for a Stable Environment (FORESTA) project. It includes the: (1) background for the project and evaluation, (2) purposes of the evaluation, (3) methodological approaches undertaken by the team, and (4) special environmental, economic, and policy conditions observed in Central America and Costa Rica during the late-1980s, when FORESTA was designed. The convergence of these special external conditions created a series of problems that helped generate this highly innovative and comprehensive response.

A. Project Background

The FORESTA Project Paper was approved by the U.S. Agency for International Development (USAID) Mission in Costa Rica on April 10, 1989. The Technical Agreement with the Government of Costa Rica (GOCR) was signed April 28, 1989. The FORESTA project focuses on developing and introducing economically and ecologically sound forestry and agroforestry programs under a new operational mechanism facilitated by the project-created, nonprofit organization, the Foundation for the Development of the Central Volcanic Cordillera (FUNDECOR). Due to numerous delays in completing the conditions precedent, the Cooperative Agreement to permit FUNDECOR to implement the FORESTA project was not signed until June 3, 1991. A Project Anticipated Completion Date (PACD) for March 21, 1996, was established.

The project focused on an ecologically diverse and strategically important region of 2,280 square km, known as the Area de Conservación de la Cordillera Volcánica Central (ACCVC). (See Figure I-1 at the end of this section for a map of the ACCVC region). The ACCVC includes Costa Rica's two most popular national parks plus three additional parks served within the ACCVC with an area of 66,752 ha. In addition, the ACCVC includes three forest reserves with an area of 46,772 ha, four forest protection zones with an area of 7,200 ha, one national monument with an area of 218 ha, plus 290,187 ha. for the "buffer zone" area. The area contains the country's principal tourist area and watersheds, valuable coffee production areas, and considerable exotic plant and fauna. The interrelated physical, economic, biological, and sociocultural aspects observed within and around this conservation area make it a region ideally suited for introducing the conservation and development strategies FORESTA embodies.

The project originally budgeted for combined U.S. and GOCR resources of \$22.5 million. Conceptually, the project was the start up phase to develop a long-term institutional mechanism to support conservation and development activities in the ACCVC. Support includes \$7.5 million from USAID and an equivalent dollar investment of \$15 million colones from the GOCR, and provides for the creation of an endowment fund of \$10 million, the major portion of the GOCR contribution. The interest generated from this fund will permit FUNDECOR to have a permanent means for financing its basic operational costs after the PACD. FORESTA's overall activities and objectives as described in the Project Paper

would be financed from projects developed from other sources to include user fees, the GOCR, Costa Rican and foreign foundation and private sector institutions, and other donor sources.

The first project evaluation was scheduled to be initiated 30 months after project sign up. However, due to the extensive delays associated with the project's start-up, it was delayed until this year. In April 1994, USAID's newly created Environment Center in the Global Bureau requested the Development Strategies for Fragile Lands (DESFIL) project to recruit a team to undertake this evaluation. Chemonics International, which manages the DESFIL contract, engaged a team of consultants through a buy-in to conduct the evaluation. The following persons comprised the team:

David Bathrick, institution development specialist and team leader
Edgar Briceno Rosales, financial analyst
Howard Daugherty, international conservation and development specialist
Robert Mowbray, forest/agroforestry specialist

The team's principal contacts with the USAID Mission were project officer Michael Maxey (who is also their program officer) and the mission's technical liaison, Froylan Castañeda, the forestry and park management technical advisor employed under FORESTA's technical assistance contract with Price Waterhouse. Mr. Castañeda accompanied the team throughout most of the assignment and participated actively and substantively in team deliberations.

B. Purpose of Evaluation

The two major purposes of this one-month midterm evaluation were to (1) review progress towards achieving the FORESTA Project Paper's outputs and (2) assess the institutional development and implementation capability of FUNDECOR. During July 1992, new FUNDECOR leadership had developed a revised project logical framework; to conduct the first objective, USAID requested the team to review the project "outputs" generated from this exercise. Pursuant to these reviews, USAID requested the team to develop the most appropriate outputs and activities for best accomplishing the project's purpose during FORESTA's remaining two years.

To most effectively accomplish the multiple purposes of this midterm evaluation, deemed critical for helping guide USAID, GOCR, and FUNDECOR during a crucial period of project evolution, the team adhered to the very comprehensive work developed by USAID (see Annex A). In effect, it required that five discrete products be developed: (1) review and assess status of FORESTA Project Paper outputs; (2) review and assess status of the FORESTA revised logical framework outputs; (3) develop the most relevant outputs and activities to guide the project to PACD; (4) conduct an institutional analysis of FUNDECOR; and (5) develop the most appropriate criteria and control mechanisms to guide USAID's release of the endowment.

The challenging exercise was complicated because of the dramatically changing nature of the USAID/GOCR bilateral assistance program. All of the mission's programs are scheduled to terminate six months after the FORESTA PACD in September 1996. USAID's

capacity to provide the usual follow-up to help guide post evaluation activities and related nurturing usually associated with institutional development projects, would be limited. In preparation for the future, the mission was already downsizing its staff and program responsibilities.

C. Methodology and Approach

The evaluation was conducted between June 29 and July 30, 1994. Prior to departing Washington, D.C., the team leader met with individuals with recent experience with FORESTA including, Gary Hartshorn (vice-president for science at the World Wildlife Fund), Phillip Church (team leader of a USAID/W Center for Development Information and Evaluation (CDIE) global program which had just completed an impact evaluation of FORESTA), and Albert "Scaff" Brown (team leader of the recently completed Regional Environmental and Natural Resource Management (RENARM) project evaluation, completed for USAID/ROCAP by Chemonics International).

Upon arrival, the team embarked on a series of briefings and follow-up interviews with an extensive list of USAID, GOCCR, FUNDECOR, Price Waterhouse (the project's technical assistance contractor), private sector, nongovernmental organization (NGO), land owners, university, and research center representatives in San Jose and in various field sites in the FORESTA project area of operations, the ACCVC. See Annex B for a list of the team's contacts made during the evaluation: see Annex C for the bibliography of materials reviewed.

Fourteen person-days were spent throughout the ACCVC gaining invaluable perceptions from program leaders and workers, collaborators, and with actual program beneficiaries and participants in the major action areas within the ACCVC. Prior to leaving Costa Rica, the team shared their draft report with USAID, GOCCR, and FUNDECOR officials. Pursuant to a comprehensive review in San Jose, the report was finalized in Washington. The report benefited from the oral observations and written comments provided by USAID, GOCCR, and FUNDECOR officials. The final report and recommendations represent the collective judgement, and wherever possible, the consensus of the evaluation team.

D. Mid-1980s Project Setting and Current Policy Environment

This portion provides a background description highlighting the major environmental, economic, and structural changes that defined the two principal parameters driving FORESTA's implementation: (1) the strategic execution of activities that combine conservation and development concerns and (2) the formulation of a new private self sustaining foundation to effectively coordinate with a broad base of intermediaries to do targeted works in the ACCVC.

D1. Central American Natural Resource Management Dynamics

Central America is dependent on its renewable natural resource base to meet the basic needs and aspirations of the human population of the region. This resource base is rapidly being eroded—figuratively and literally. Environmental problems are rapidly mounting in

kind and severity. The capacity of the region to meet human needs is declining and per capita productivity and incomes are also stagnating or diminishing.

Poor land use practices and over-exploitation are most frequently the causes of resource degradation, environmental deterioration, and the concomitant detrimental impact on the quality of human life. The limited ability of governments to respond to rapidly changing conditions is a significant contributing factor, as well as the lack of an appropriate international response.

Although the 1980s were also a period of intense political turmoil and civil strife within the Central American region, environmental concerns increasingly were coming to the attention of the regions political leaders. The principal regional response to such developments was USAID/ROCAP's RENARM project, a \$60 million, 10-year activity that was authorized in 1989.

D2. Sustainable Development for Costa Rica

Within this general regional context, Costa Rica is an anomaly, with less human population pressure on the landscape and its resources, stronger government institutions, more capable political leadership, and an area where a large number of national and regional centers of excellence reside. Nevertheless, basic human needs are not being met adequately and poverty persists in many rural and some urban areas. Furthermore, Costa Rica has one of the world's highest rates of deforestation outside of its protected areas. The country lost more than half of its remaining forests between 1970 and 1990. Forecasts indicate that Costa Rica will be a major net importer of timber before the end of the century. Associated with the deforestation has been serious problems of soil erosion, reduced water supply, accelerated siltation and sedimentation, and the loss of wildlife habitats. Because of the exceptionally high degree of biodiversity in Costa Rica a major concern is the actual and potential loss of innumerable species.

The principal causal factors of deforestation have been the demands for agricultural land, the conversion of forest to pasture, and the high demands for tropical timber—both internally and internationally. During the 1980s, there was increased agreement that the high rate of deforestation and associated land and natural resource degradation was compromising the ability of Costa Rica to achieve sustainable development. Radical strategies and new operational systems needed to be expeditiously introduced to assure Costa Rica's future growth and well being.

D3. Economic Situation and Changing Policies

Similar to other Latin American countries during the 1980s, Costa Rica directed significant policy and structural reforms toward the transformation from an economic development strategy driven by import substitution to a more export market driven strategy. Also, due to debt problems, public sector expenditures had to be reduced—particularly staff positions. To help facilitate the new market oriented approaches, public sector institutions had to be streamlined to function more as facilitators of change.

Within this context, the forest sector was identified as seriously handicapped. Outmoded policies, had, in retrospect, reduced incentives for assuring the most appropriate land management practices and growth investment opportunities. Under this legacy, no logs could be exported. There was a very high import tax on finished wood products (1,230 percent). Saw milling and processing operations were notoriously wasteful and inefficient. Consequently, land owners and processors had little incentive to efficiently manage forest resources and products.

Further, the land cleaning activities of the 1970s and 1980s promoted by other misguided subsidies prompted deforestation and forest conversion to open pasture and agriculture land. Later, many of the new enterprises observed productivity declines due to changing markets and resource management practices. However, forest destruction and overexploitation of available lands still occurred, due in major part to more limited remunerative employment opportunities and low levels of family income for a relatively small, but still significant, number of rural residents. For this segment, low productivity agriculture and related land clearing activities were an important option. Concurrently, the new interest in ecotourism was helping foment a tourist boom. Tourism now ranks second as a source of foreign exchange and is expected to expand to soon be number one, as coffee prices revert to traditional levels. These complex developments, combined with the increased costs Costa Ricans pay for imported wood products, have forced economists, foresters, and policy makers to seriously reconsider the established policy framework.

A USAID financed draft policy study ("Incidencia del Comercio Internacional Sobre la Economía del Sector Forestal Costarricense" by Rigoberto Stewart) concluded that policies had evolved to the point that landowners and wood processors received 50 percent less for their products when compared with the prices observed on the international markets. These and other "incentives" contributed to alarmingly high deforestation rates, with immense economic and social costs. Some thought more market liberalization practices were needed if the sector was to make its appropriate contribution to the nation's economy. If properly executed and the level of value added activities increased, forest conservation objectives would also be facilitated.

D4. Strategic and Institutional Responses

Within this dramatically changing policy context, major structural and new institutional approaches began to be considered. While very dedicated public servants were undertaking heroic conservation/protection activities, most government agencies dealing with natural resources were notoriously inefficient, not respected by local land users, and (due to the prevailing system) certain controls were not enforced. "Police" practices in and of themselves would not be the solution and might even be part of the problem. Increasingly, experts began to conclude that forestry development strategies had to embrace the working precept that in addition to the policy corrections, inequitable access to economic opportunity is a major cause of deforestation. Therefore, opportunities for increasing sources and remuneration for local employment must also be pursued.

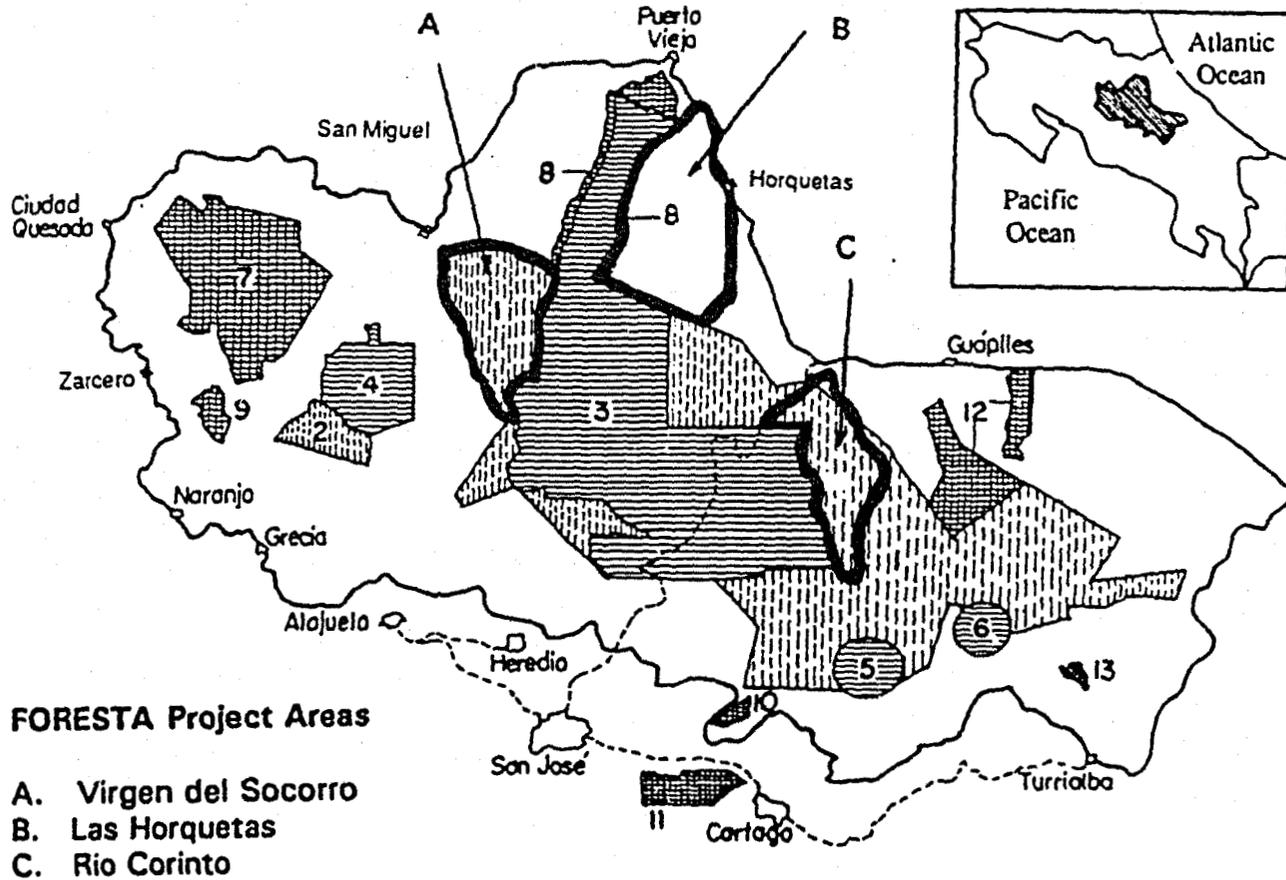
Although new forest and land management strategies to accomplish this objective had to be developed and rapidly introduced, in light of GOCR budget limitations, the national treasury would not be the sole solution. An increased number of NGOs had become more

directly involved in park and associated resource management activities and were generating funds from a variety of foreign and local sources. While some of these organizations were performing well, increasingly in the late 1980s, some were encountering considerable difficulties for confronting the new wave of pressing problems. Other NGOs were suffering financial management problems. While many of the NGOs offered contributions, none were sufficiently prepared and equipped to confront the daunting emerging challenges observed in the ACCVC.

Recent development dynamics required that new strategies and technologies and special operational mechanisms for accessing a variety of specialized public and private sector institutions be brought together. The country's highest priority conservation area was particularly vulnerable. Within this crisis like setting, FUNDECOR was founded.

FIGURE I-1

CENTRAL VOLCANIC MOUNTAIN RANGE CONSERVATION AREA



PROTECTED AREAS WITHIN THE CONSERVATION AREA

- | | |
|---|---|
| 1. CENTRAL VOLCANIC MOUNTAIN RANGE FOREST RESERVE | 8. LA SELVA PROTECTION ZONE |
| 2. GRECIA FOREST RESERVE | 9. CHAYOTE PROTECTION ZONE |
| 3. BRAULIO CARRILLO NATIONAL PARK | 10. TIRIBI RIVER PROTECTION ZONE |
| 4. POAS VOLCANO NATIONAL PARK | 11. CARPINTERA PROTECTION ZONE |
| 5. IRAZU VOLCANO NATIONAL PARK | 12. GUACIMO POCOCI AQUIFERS PROTECTION ZONE |
| 6. TURRIALBA VOLCANO NATIONAL PARK | 13. GUAYABO NATIONAL MONUMENT |
| 7. JUAN CASTRO BLANCO PROTECTION ZONE | |

SECTION II

FORESTA PROGRAM DESIGN

This section provides an overview description of the project's goal and purpose and of the four components (including budgets and the expected outputs): (1) global operations, (2) management of protected areas, (3) management of natural forests for production, and (4) introduction of trees on farms. In addition, due to the redesign exercise initiated by FUNDECOR's second Administrative Junta (the governing board as required by the GOOCR legislation for foundations), a background discussion of the revised proposed project outputs for each activity is also presented. A brief comparison describing the major differences between FORESTA's original outputs and the revised FORESTA outputs is also included. This section concludes with a description of the technical assistance activities financed under the FORESTA project. This section provides the basic inventory for the assessments provided in Section III.

A. Project Goal and Purpose

The FORESTA project is a response to a series of complex interrelated environmental and economical changes, which if not addressed with the highest degree of commitment and imagination, would produce irreversible problems affecting Costa Rica's well being. The difficult process of reversing rates of deforestation had to be urgently attacked. For this undertaking, a more permanent structure—bringing together more technically proven approaches and practices and operating under flexible, market-based operational principles—was needed. After extensive analysis, the FORESTA Project Paper design team concluded that a comprehensive series of new forest based land management practices needed to be introduced.

The Project Paper (1989) defined FORESTA's goal and purpose as follows:

"The project goal is to support Costa Rica's long-term economic development by conserving and developing its renewable natural resources upon which sustainable-economic growth depends."

"The project's purpose is to develop forestry and agroforestry as economically and ecologically appropriate land uses in the buffer zones around the Braulio Carillo, Poas, and Irazu National Parks and other protected areas. This will be done by strengthening an ~~independent private foundation~~—FUNDECOR, which will provide direction, technical assistance coordination, and funding to address the project's four components."

"Achievement of the project's purpose will be demonstrated by the following conditions upon the completion of the project:

- The most important accomplishment will be the strengthening of FUNDECOR as a permanent private organization primarily responsible for the control and use of the natural resources of the Central Cordillera.

- Effective management through FUNDECOR of the protected areas and their buffer zones in the Central Cordillera.
- Creation of at least one efficient forest enterprise integrating forest management with wood processing and marketing.
- End of rampant deforestation in the Central Cordillera and support for active reforestation programs.
- Supporting area residents for land-use management and agroforestry practices on their own lands.
- Increases in local incomes through improved forest management and new jobs created by FUNDECOR and the forest enterprise.”

FUNDECOR's revised logical framework presented to USAID in the fall of 1992 is somewhat similar to FORESTA's as it relates to the goal statement, but differs regarding the project purpose statement. Whereas the FORESTA purpose is broad in scope and embraces conservation and development objectives, FUNDECOR's embraces these objectives and goes beyond. It focuses on FUNDECOR's institutional development as the means to address these same objectives related to conservation, development, and sustainable use of the natural and cultural patrimony within the ACCVC.

B. Global Operations Project Component

B1. Brief Description

The GOCR established FUNDECOR in 1989 as the “implementation unit” for undertaking FORESTA activities. This component provides resources to help FUNDECOR become “responsible for implementing most project activities.” Technical assistance in forest and project administration would help FUNDECOR to execute its tasks by “performing most of the natural resource management functions now dispersed among several government agencies.” Project resources were provided to prepare an overall development strategy for the ACCVC. In addition, a series of crosscutting support services were included within this component: (1) new park infrastructure to include various “operations centers” and visitors centers within the national parks; (2) new park protection infrastructure programs and approaches for acquiring and improving the ranger and protection staff; and (3) an educational and extension program to begin changing land use attitudes and behaviors at the grassroots level. Although this compound has the largest budget, most of the resources are focused on crosscutting support activities implemented by other GOCR units with specific mandates.

B2. Budgetary Support Levels**Table II-1. Global Operations Component**

	USAID (\$000)	GOCR (C000)	TOTALS (\$000)
Overall Strategy	67.1	--	67.1
Operations Center	--	104,660.4	1,358.2
Forest Protection	2,731.7	113,638.2	4,207.5
Environmental Education	30.0	780.0	40.3
TOTAL	2,828.8	219,078.6	5,674.9*

*Figures do not total exactly because of slightly different conversion rates.

B3. Project Paper Outputs

The life of project outputs for the global operations component are the following:

- An overall development strategy for the Cordillera Central and the buffer zone that includes management guidelines for all land categories and plans for land acquisition.
- Strategically located and adequately equipped operations centers.
- An efficient control and protection system for ACCVC with long-term financing to prevent illegal interventions and the removal of other forest products.
- An environmental education and extension program emphasizing local communities.

In comparing this component with the descriptions from the same component in the Cooperative Agreement, far less money was provided for overall strategy development and forest protection activities. Administration, a new activity, was included in the Cooperative Agreement and although not budgeted, provision was made for a biodiversity inventory.

B4. FUNDECOR Outputs

The proposed life of project outputs revised by FUNDECOR for the global operations activity that significantly differ from those listed above are:

- FUNDECOR's actions embrace and continue the conservation and development strategies for the ACCVC.

- FUNDECOR's administrative systems and procedures are established, correctly applied, and functioning efficiently.
- FUNDECOR's world level advisory council is established and is regularly meeting.
- Endowment fund is established and financing FUNDECOR's basic operational budget.
- FUNDECOR is executing its mission with funds generating from different projects.
- FUNDECOR identifies changes required in the environmental legislation so that biodiversity conservation is favored in the ACCVC.

B5. Comparison

The major difference noted between the FORESTA and the FUNDECOR outputs is the increased attention directed toward strengthening FUNDECOR's capacities and roles. This is a product of the changes observed earlier regarding the revised project purpose statement. A series of specific new outputs deal with FUNDECOR's future status as they affect institutional, funding, and political activities. FUNDECOR's new leadership concluded that one means for achieving FORESTA's conservation and development objectives within the ACCVC was via a strengthened FUNDECOR. FORESTA's and FUNDECOR's versions both embrace the need for a strategy document and environmental education program and as such, are the only two listed activities that are in both documents. No provision is made for the park operations centers and new park protection systems within the FUNDECOR outputs.

C. Management of Protected Areas Project Component

C1. Brief Description

The management and protection of national parks and equivalent reserves is a critical dimension of long-term sustainable development in the ACCVC. Protected areas play key roles in the conservation of biodiversity, the maintenance of ecological processes, the stability of regional hydrology, a carbon sequestration, and a buffer against climate change, particularly at the local level.

There are five national parks within the ACCVC (Poás Volcano, Irazú Volcano, Braulio Carrillo, Turrialba Volcano, and Juan Castro Blanco), two forest reserves, four protection zones and one national monument (Guayabo). (See Figure I-1 for a map overview.) These areas have a total area of 146,000 ha. All have legal status, but some land remains under private ownership (including all of Juan Castro Blanco).

This component is designed to guide the management of these protected areas to ensure the long-term stability of their ecological/biological values and enhance the economic benefits for local residents from improved park management and related business and employment opportunities.

The activities planned for this component include the preparation of management plans, the demarcation of protected areas boundaries, the purchase of privately-held land holdings through private fund-raising nationally and internationally, the improvement of visitors facilities and services, the promotion of nature-oriented tourism, and the integration of local communities into protected areas management activities.

C2. Budgetary Support Levels

**Table II-2. Management of Protected Areas USAID and GOCR
Budgetary Support levels**

	USAID (\$)	GOCR (C000)	TOTAL (\$)
Management Plans	71,300		71,300
Mark Boundaries	119,800		119,800
Buy-In holdings	18,100		18,100
Infrastructure for Visitors	--	35,536.8	459,132
Visitor Services	23,000		23,000
Community Participation	450,000	1,638.0	471,630
TOTAL	682,200	37,174.8	1,162,200

The only difference between the Project Paper and the Cooperative Agreement is that the agreement provided an additional \$52,000 to the visitor services activity, resulting in a total USAID contribution of \$734,200.

C3. Project Paper Outputs

- The preparation of an integrated management plan for protected areas in the ACCVC that is officially approved by the Ministry of Natural Resources, Energy, and Mines (MIRENEM) and is available and accessible.
- The boundaries of protected areas are legally established in accordance with park management plans and the critical segments are marked in the field.
- The ownership of private enclaves within three parks are transferred to GOCR, for those properties designated for acquisition in the management plan.
- The services and physical infrastructure, including those needed for interpretation, are in place to attend to park visitors without detriment to the environment.

- An efficient system of services to visitors to natural areas is in place and long-term financing is assured.
- Local communities are participating in the management of protected areas and receiving income and other benefits as a result of this participation.

C4. FUNDECOR Outputs

- Technical management and administration of the national parks within the ACCVC are introduced.
- An integrated management plan for national parks is prepared and put into practice.
- Critical boundaries of the national parks are defined and marked in the field.
- An efficient system of visitor services is utilized in the national parks of the ACCVC, and is generating funds to help defray the operating costs.
- An efficient system of protection and vigilance for the conservation of the natural resources of the ACCVC is prepared and executed.
- A research plan for the conservation of biodiversity and cultural resources of the ACCVC is prepared and put into practice.
- The communities adjacent to the parks are participating in management and benefitting from improved management.

C5. Comparison

The FORESTA Project Paper outputs and the FUNDECOR outputs share the following: (1) an integrated management plan for the protected areas of the ACCVC; (2) the delineation and demarkation of protected areas boundaries; (3) services and infrastructure for visitors to national parks; and (4) community participation in, and benefits from, the management of national parks.

There are several significant differences in the outputs as described by the Project Paper and by FUNDECOR. Although both include the preparation of an integrated management plan for national parks within the ACCVC, FUNDECOR emphasizes the actual implementation of changes in the technical and administrative management of the parks, whereas there is no mention of implementation in the Project Paper log frame.

In addition, the following observations are made: FORESTA's outputs include the transfer of private land in the national parks to GOCR and FUNDECOR's does not. Further, FUNDECOR includes a research plan for the conservation of biodiversity and cultural resources of the ACCVC and its implementation; whereas FUNDECOR's does not mention research. FUNDECOR emphasizes protection (guards, patrols, etc.) to achieve conservation objectives and the FORESTA document does not.

D. Management of Natural Forests for Production Component

D1. Brief Description

Under the FORESTA plan, the two more buffer zone/development orientated components are described here and in Section III.E. This component will be implemented in both primary and secondary forests, where forestry activities are legally permitted, the land is classified as capable of sustainable production of timber products, and where natural forest cover is the predominant land use. Component activities will concentrate on the three remaining areas in the ACCVC with sizeable areas of forests with commercial potential: Las Horquetas, La Virgin del Socorro, and Rio Corinto. (See Figure I-1.)

As proposed in the Project Paper, FUNDECOR would develop guidelines for all aspects of forest harvesting operations (tree selection, logging practices, road construction, and postharvest silvicultural treatments to promote natural regeneration and growth). FUNDECOR would also support contracts for applied research to test selective cutting and strip cutting systems and to improve forest management guidelines. Finally, FUNDECOR would provide technical assistance and financial incentives for a commercial enterprise that would link timber processors with the forest that produces it—to maximize the return to the owners of the forest.

D2. Budgetary Support Levels

Table II-3. Natural Forest Management

	USAID (\$000)	GOCR (C000)	TOTAL (\$000)
1. Control Mechanisms	5.0	--	5.0
2. Technical Guidelines	100.0	--	100.0
3. Forest Enterprise	40.0	--	40.0
4. Forests Under Management	27.5	--	27.5
5. Investment Incentive Fund	--	78,000.0	1,000.0
TOTAL	172.5	78,000.0	1,172.5

The Project Paper breakdown differs somewhat from the Cooperative Agreement, which shows \$98,000 in local currency under the "Forests Under Management" activity and does not include the GOCR contribution for the "Investment Incentive Fund." The Cooperative Agreement shows a total of \$288,000 (\$30,000 and \$258,000 in local currency) for this component. The Cooperative Agreement does not mention any GOCR contribution to support any project activities during the life of the FORESTA project.

D3. Project Paper Outputs

The Project Paper calls for the following outputs for the Natural Forest Management component:

- Practical guidelines, regulations, and controls for logging under various conditions to encourage regeneration and optimum utilization and to mitigate environmental impacts.
- Technical standards for forest management to serve as a foundation for the preparation, implementation, and control of management plans.
- One or more functioning enterprises or other types of associations that combine forest management with its utilization so that the forest contributes sustained benefits to the local population.
- At least 5,000 ha of forest with commercial potential under sustained management based on approved plans.
- One or more industries integrated with the new forest enterprise, utilizing the maximum possible range of species and dimensions to produce a range of products.

D4. FUNDECOR Outputs

The outputs prepared by FUNDECOR groups natural forest management and the integration of trees on farms under the heading of "Private production activities that are ecologically, economically, and socially sustainable are implemented in the buffer zone of the ACCVC's national parks." One of the outputs, "Actual area of forest cover maintained or increased," applies to both components. Those outputs that are associated with natural forest management are listed below.

- Practical illustrated guides on forest management that teach and promote efficient forest harvesting and management are prepared and used.
- Technical guides for the preparation of forest management plans are improved.
- One or more forest enterprises or other types of organizations are benefiting from the sustainable management of the forest.
- At least 10,000 ha of forest under management agreements with FUNDECOR and 5,000 of them with approved forest management plans.
- Ecotourism is developed as a productive alternative to allow the conservation of large areas of forest.

D5. Comparison

While none of the outputs in the logical framework prepared by FUNDECOR is exactly the same as the outputs in the FORESTA Project Paper, the first four outputs in each list are similar. The closest matches are outputs three and four, dealing with the establishment of one or more forest enterprises and the area to be covered by natural forest management agreements. FUNDECOR's output number four is much more ambitious than its analog in the Project Paper.

Outputs one and two are also similar in the two versions of the logical framework. The FUNDECOR version of these outputs is more specific, but, perhaps, less ambitious than FORESTA's Project Paper version. Output number five in each version calls for the development of enterprises that will benefit from forest management and provide benefits to local populations (similar to output 3), but the Project Paper had the manufacture of forest products in mind whereas FUNDECOR calls for a more benign forest use—ecotourism.

E. Introduction of Trees on Farms Project Component

E1. Brief Description

Under this component, FUNDECOR will encourage reforestation and agroforestry on deforested lands and promote community participation in the conservation of the natural resources of the ACCVC.

Much of the land in the ACCVC that has been converted to pasture or agriculture is not capable of sustaining such uses. FUNDECOR will encourage appropriate land use and reforestation of land that is not appropriate for agriculture and the incorporation of trees with crops and pastures on agricultural land. FUNDECOR will also create or fortify local grassroots organizations to promote these activities. Preference for participation in reforestation and agroforestry activities will be given to cooperatives and other groups.

FUNDECOR will provide technical and modest material support for the establishment of communal, family, or commercial nurseries and will also assist with the acquisition of quality seeds and the provision of short courses for tree planters and nursery operators. A collaborative agreement with the USAID/ROCAP Tree Crop Production project will help monitor demonstration plots and carry out research on growth and management practices. FUNDECOR will contract two teams of extensionists to promote agroforestry.

FUNDECOR will include biological diversity and the creation of wildlife habitat among the criteria for selecting the species to be promoted.

E2. Budgetary Support Levels

Table II-4. Introduction of Trees on Farms

	USAID (\$000)	GOCR (C000)	TOTAL (\$000)
1. Reforestation	2.0	16,224.0	209.75
2. Agroforestry	6.5	16,224.0	214.25
3. Community Involvement	16.0	—	16.0
TOTAL	24.5	32,448.0	440.0

Both the FORESTA project paper and the USAID Cooperative Agreement with FUNDECOR include reforestation, agroforestry, and community involvement in this component, but the budgetary levels for the activities vary in the two documents. The cooperative agreement budget for this component is much larger—\$700,000 despite the fact that no GOCR support is included. Almost 60 percent of the budget (\$400,000) is for community involvement; \$150,000 is budgeted for reforestation and \$150,000 for agroforestry.

E3. Project Paper Outputs

The Project Paper calls for the following outputs for the Introduction of Trees on Farms component:

- Establishment of an economically productive forest cover on those non-forested lands classified as incapable of sustaining agriculture.
- The integration of multi-purpose tree species into agroforestry systems on those lands classified as appropriate for agricultural use.
- Communities in the project area have grassroots organizations active in furthering appropriate land use in areas that influence the community.

E4. FUNDECOR Outputs

The logical framework prepared by FUNDECOR groups natural forest management and the integration of trees on farms under the heading of "Private production activities which are ecologically, economically, and socially sustainable are implemented in the buffer zone of the ACCVC's national parks." One of the outputs, "Actual area of forest cover maintained or increased," applies to both components. Those outputs that are associated with reforestation and agroforestry are listed below.

- Reforestation and agroforestry are developed as productive activities capable of reducing the pressure on the natural forest.

- Silvicultural guides and technical knowledge for efficient reforestation are developed.
- Ranchers, landowners, and project beneficiaries are trained in the conservation of natural resources.

E5. Comparison

With the exception of the number of tree seedlings to be produced and planted, the indicators for the FUNDECOR outputs are much less ambitious and put much less emphasis on agroforestry and community outreach than does the FORESTA Project Paper. FUNDECOR's outputs emphasize working with individual landowners to produce tree seedlings and establish plantations, while the Project Paper puts the emphasis on working with community organizations and large numbers of farmers to improve land management and introduce agroforestry practices in pastures and with crops.

The FORESTA Project Paper also calls for the establishment of plantations on at least half of the Class VIII and IX land in the ACCVC not covered by forest—an objective that is probably more ambitious than FUNDECOR's goal of 1000 hectares. FUNDECOR's goals of 1000 hectares of plantation and production of 3,000,000 tree seedlings do not appear to be consistent, since 3,000,000 seedlings are enough to reforest almost 3,000 hectares at the spacings normally used in the ACCVC.

F. Technical Assistance Support Activities

Given the numerous challenges this newly formed foundation would confront, particularly in the development of pioneer approaches and operational systems, project designers programmed targeted technical assistance to FUNDECOR. As soon as practical, and prior to the GOCR legislation that actually ratified FUNDECOR, a contract was to have been negotiated. The purposes were to provide technical and administrative expertise to support FUNDECOR, assist with initial implementation actions, and actually handle the project funds. The consultants were to be key facilitators for getting things going as early as possible, on all fronts.

On March 7, 1991, a \$1,175,000 technical assistance contract was signed with Price Waterhouse to provide 198 person-months of long- and short-term advisory support in three major working areas: (1) institutional development, (2) administrative and finance, and (3) forestry and natural resources management—through a subcontract with the Central American Institute for Agricultural Research and Education (CATIE). Since the Project Paper requested the assistance to be provided as early as possible, particularly for the development of the financial management manuals, a smaller contract signed in late 1992, permitting the first advisor to do important start up work.

SECTION III
ASSESSMENT OF COMPONENT PROGRESS

The scope of work for this evaluation emphasizes the evaluators' description and analyses of the progress made toward achieving FORESTA's outputs as described in the original Project Paper and FUNDECOR's subsequent revision. This section builds from the descriptive material in Section II, and presents the evaluation team's assessment of the progress observed towards achieving End of Project (EOP) targets for each of the four FORESTA project components (1) global operations, (2) management of protected areas, (3) management of natural forests for production, and (4) introduction of trees on farms. To more easily assess program progress, a series of tables for each component is provided, followed by a brief summary of the various observations.

The FUNDECOR program review exercise, which included a comprehensive reassessment of all activities that occurred with the arrival of FUNDECOR's second Administrative Junta, generated new outputs. Progress made for each of these is also assessed under each of the same components.

Although general observations are provided for both series of outputs, where deemed appropriate, more specific suggestions are provided to the various new PACD outputs contained in Section VII.

This section closes with a discussion of the technical assistance support contract and how these services facilitated overall progress.

A. Global Operations

A1. Status of Project Paper Outputs

Table III-1. Summary Overview—Global Operations

Planned LOP Output	Status, June 92	Probable EOP
Develop ACCVC strategy document	Almost finalized	GOCR implement document
21 Operations centers constructed	Some significant progress.	Some fully completed
Protection system in place	Partially in place	Additional attention required
Environmental education & extension program	Not yet started	Strategy and program developed

A2. Comments and Observations

A number of activities are now under way under FUNDECOR. However, there are major shortfalls in some of the activities, principally because of budgetary constraints due to the major reduction of almost all GOCR counterpart funds. Soon after project start up, counterpart funds were slashed, significantly affecting this component. Compared with the other FORESTA components, FORESTA'S two largest budget activities for counterpart monies are from this component—(1) the operations centers (C104,660,000) and (2) the forest protection (C113,638,000).

As originally conceived, the ACCVC strategy document was to be the overall "master plan" for guiding the new conservation and development strategies and activities within the ACCVC. As such, this was originally planned to be completed early, but such progress did not occur. The newness of FUNDECOR, the complex nature of the task and the new collaborative working relationships that had to be developed did not facilitate the production as originally planned. Instead of a quick push to produce "the document," a more methodical approach was employed emphasizing consensus building and institutional collaboration.

The special catalytic institutional mechanism developed early on was the "Grupo Base." The project created this multi-institutional planning and program strategy planning and coordinating entity, comprised of leadership of the ACCVC, National Park Service (SPN), General Directorate for Forestry (DGF), FUNDECOR, and the USAID project officer to meet weekly to review all aspects of FORESTA activities. This group has approved the last draft of the strategy document. The draft contains the basic products listed in the output statement and more. Employing this longer process, a firm base of mutual trust and interdependence has been created and mutually agreed activities have been initiated. Given the newness of the FORESTA multi-agency structure, the longer process employed has helped generate a very solid working relationship for guiding FORESTA and solidifying an institutional structure for possible operations beyond the ACCVC, according to the new GOCR sector leadership.

Due to the counterpart reductions, a smaller number of project constructed activities were undertaken than originally planned. Since many of the activities intended here are also listed under the Management of Protected Areas Component, refer to Section III.B., for a thorough discussion of function and degree of completion.

Budgeted initially at \$2.7 million, forest protection is FORESTA'S largest activity. This is the principal element of the project that deals directly with the large number of forest and animal poaching activities that increasingly have been observed within the ACCVC. The bulk of the resources has been used to acquire vehicles, radios, camping equipment, training, and other benefits to the SPN forest guard and ranger staff. The number of rangers has increased to 20. The Project Paper target of 40 will probably not be reached.

The guard and ranger personnel and their new rapid mobility and effective radio communications have considerably increased the rate of inspections and violation reports. Although this progress is noteworthy, the system is only partially in place. Improved operational effectiveness, including better personnel and operational supervision and

management and a more professional career development system, are areas that need immediate attention. Such actions, plus a much closer follow-up and coordination with the judicial system, is required to take full advantage of this investment. Presently, there is very little follow-up on any of the violations reported, so few are fined or receive jail sentencing. This approach does not provide the needed behavioral changes since the legal controls and punishments are not tasked; in addition, it creates a debilitating attitude for the rangers and guards involved.

The education and extension program has not yet been initiated along the lines described in the Project Paper. While a series of guide books and education materials are now being finalized and technical reports have been published, project designers and USAID project officers envisioned a much more comprehensive program. At the same time, limited resources were budgeted for this activity. Within FUNDECOR, there has not been much support for the broader definition as conveyed in the Project Paper. This year, \$12,000 was budgeted to develop a plan from which new strategies may be introduced prior to the PACD.

A3. Status of FUNDECOR's Outputs

Table III-2. Summary Overview—FORESTA's Global Operations

Planned LOP Output	Status, June 92	Probable EOP
ACCVC Strategy Approved	Almost finalized	GOCR Implements documents
FUNDECOR implements this strategy document	Presently doing	Other areas incorporate document
Administrative systems developed	Presently being implemented	Constantly improving systems
Technical advisory body established	Being discussed	In place and functioning
Endowment fund in place	Much discussion under way	A must do!
2 new projects added	No prospects in sight	A must do!
Pro-biodiversity legislation developed	None yet	Should not be encouraged
Environmental education plan started	Plan budgeted	Strategy and program developed

A4. Comments and Observations

With much interest, the evaluation team notes the special emphasis on the number of significant FUNDECOR-directed institutional strengthening activities proposed. The evaluation team observed some progress in many of the proposed outputs but also observed that significant PACD outputs are unlikely to occur.

Regarding the first two outputs, ACCVC strategy document and the implementation of this document, recent progress on both fronts was observed. A quality strategy document will soon be formalized and the interesting process employed in generating the document, particularly as it relates to the SPN and ACCVC, was facilitated by this approach.

The Price Waterhouse technical consultants developed and modified the highly regarded administrative systems and manuals that deal with all aspects of FUNDECOR's core administrative and management systems. These are an essential part of FUNDECOR's operations. To a major degree, FUNDECOR serves as a facilitator for others—private contractors, special employment agreements, and agreements with governmental agencies—so reliable and transparent systems are essential.

The team is supportive of recent efforts for helping to ensure that the long-term technical and strategic direction be provided via a new technical advisory body. There are numerous strategic approaches for accomplishing the project's goals, but the one presently employed, with relatively minor adjustments, is one that will require time to evolve. The advisory body is one mechanism to help assure program continuity. This mechanism is further discussed in Sections VII and VIII.

The team places the highest priority on the quick establishment of the endowment fund and the signing of two new project contracts. Regarding the first activity, much work at the highest institutional levels was invested last year and based on that experience and the suggestions provided in Sections VII and VIII, quick closure is possible. There is urgent need to address this output to initiate new contracts.

While a laudable output, the development by the FUNDECOR of biodiversity legislation is not one seen as a high priority activity, at least at this juncture. Recognizing the long time and extensive efforts usually associated with the legislative process and the higher priority activities that must be accomplished before the PACD, the team does not strongly encourage much FUNDECOR effort in this area.

As mentioned above, the environmental education and extension output has been implemented in a variety of ways via upcoming publications and technical manuals. It has not been implemented within the context of a strategy and working plan as was intended initially and does not reflect the identifiable indicators provided in this reprogramming document. The team hopes that the scope of work for the upcoming education study to be done later this year will encompass this broader thrust. Additional discussion on this theme is provided in Sections VII and VIII.

B. Management of Protected Areas

B1. Status of Project Paper Outputs

Table III-3. Summary Overview—management of Protected Areas

Planned LOP Output	Status July 94	Probable EOP Status
Integrated management plan for protected areas	Nearing completion (fall, 1994)	Completed
Demarcation of protected area boundaries	Critical boundaries identified; 31% of total boundaries marked	< 50% completed
Transfer of ownership of private lands within parks to GOCR	Very limited progress	No more than minor progress anticipated
Visitor services and infrastructure in place	50% completed	Completed
Efficient system of visitor services with long-term financing	Significant planning done; some important progress made	90% completed; major training gaps
Local community participation in park	50% completed	Completed, except for local advisory boards

B2. Comments and Observations

Substantial progress has been made in most dimensions of the "management of protected areas" component of FORESTA, although this progress has not always been achieved through the processes originally anticipated and planned. This indicates a capability on the part of FUNDECOR to respond and adapt to rapidly changing conditions, which is one of the key indicators of the strengths of an effective organization.

The preparation of the integrated management plan for national parks was begun through an initial contract with Price Waterhouse/CATIE. This contract was terminated before the project was completed for reasons that are not entirely clear, but apparently due to financial limitations. At the same time, The University of Costa Rica's Research Foundation (FUNDEVI) was contracted by the Instituto Costarricense de Turismo to prepare a management plan for parks based principally on the income-producing potential of the parks through increasing tourism. The SPN and the ACCVC have been working on management plans for individual parks, reflected in annual work plans and budgets.

The task of integrating management concepts and data from the above sources now rests with the ACCVC. A second revision of the FUNDEVI documents has been submitted in response to directives from the ACCVC. The ACCVC expects to complete the overall

management plan before the end of 1994. This management plan will be based on inputs from a variety of sources, but will rely on the FUNDEVI plans and secondarily on the Price Waterhouse/CATIE documents.

The delimitation (and mapping) of critical park boundaries has been completed for Braulio Carrillo, Poás, and Irazú National Parks. No equivalent definition of critical boundaries has been done on the Turrialba Volcano National Park nor on the recently declared Juan Castro Blanco National Park. Turrialba has not been a priority for reasons that are not entirely clear; it may be related to distance, lack of sufficient personnel, or the precepts of less pressures on its borders. Juan Castro Blanco is indeed a critical area with considerable peripheral pressures, and delimitation and field demarkation of park boundaries must begin soon. Although some important initial work has been done with a local association, major work has not begun on this park because Braulio Carrillo has been correctly perceived as the main priority. Also, because Juan Castro Blanco is outside the terms of reference of FORESTA because its status as a national park was declared after FORESTA was in progress. Nevertheless, the critical importance of Juan Castro Blanco is perceived by FUNDECOR and ACCVC, and some adjustments in activities may be made.

The field demarkation of critical park boundaries will not be completed by the PACD. Of a total of 628 km of boundaries around all protected areas, 160 km are natural boundaries and require no additional marking. The critical portions of the remaining 468 km of artificial boundaries that must be marked in the field have not been identified and mapped in their entirety. Of the artificially-marked boundaries, 38 km have been done through FORESTA and 34 km by the Organization of Tropical Science (OTS) at La Selva, independently of FORESTA.

The Project Paper identified the transfer of privately-owned land within the national parks to the GOCR as an important EOP output. Only \$18,000 in the FORESTA budget is allocated for land purchase; the rest of the funds to be raised from the international donor community. This has not been seen as a priority by FUNDECOR because of the limited resources available for undertaking an activity of this magnitude. Therefore, virtually no progress has been made on this output, and none is expected by the PACD. FUNDECOR's logframe eliminated this output from its activities.

Substantial progress has been made in upgrading visitor facilities and constructing new ones at the three major national parks (Poás, Irazú, and Braulio Carrillo), Bosque del Niño in the Grecia Forest Reserve, and Guayabo National Monument. The renovation of an impressive visitors' center is nearly completed at Poás Volcano—one of the most dramatic tourist attractions in Costa Rica. The facilities at Poás have been emphasized because Poás has the highest visitation rate of all Costa Rican national parks and the greatest potential for generating tourist-derived, income both for the ACCVC and for the adjacent communities. There is also an informative visitor's center at Guayabo National Monument.

There are picnic facilities at Poás, Irazú and Bosque del Niño, and picnic/camping facilities at Guayabo. There are trails at Poás, Braulio Carrillo (Zurquí and Quebrada Gonzalez), and Guayabo. The trails and interpretative guides are best at Guayabo, which has a nature trail through a part of the primary forest and a "cultural heritage" trail through the archeological mounds (the "Montículos"). There are well-designed written guides for these

trails, which are clearly marked and well maintained. The trails at Guayabo illustrate both the natural heritage (primary forest) and cultural heritage (a major archeological site) of Costa Rica. There are also simple, but informative brochures available at Poás, Irazú and Braulio Carrillo. Although these brochures are bilingual, the English is poorly written.

The planned look-out points on the San José—Guapiles highway in Braulio Carrillo National Park have not been built because of objections by the Ministry of Public Works, which feels that look-outs on a winding, often foggy road pose a safety hazard for vehicular traffic.

An efficient self-financed system for providing services to visitors has not been designed nor implemented in its entirety. Nevertheless, there are plans for public use of individual natural areas. There are few trained guides and rangers readily accessible to visitors at any of the sites. The training of a cadre of guides and rangers at each park will not occur with the current strategy. There are, however, plans for granting concessions for some visitor services (video viewing, cafeterias, restaurants, parking, sanitation) that should be put into operation between late 1994 and PACD in 1996. The Project Paper's logical framework is redundant and overlapping in that it separates visitor facilities from a system for providing visitor services and the same activity is addressed in the global operations component.

The main verifiable indicators of community participation in national park management are being met. More than 25 percent of the temporary and permanent employment created by FORESTA activities in park management is filled by local inhabitants adjacent to the parks. There are many volunteers working in the parks, but it is impossible to calculate a total number at any given time. More than 100 volunteers—the target number—are working in the parks during at least a part of the year, normally during school vacation periods. The concessions of visitor services will be given, whenever possible, to the private sector (mainly micro-enterprises) of adjacent communities. One aspect of the community participation output that will not be achieved is the creation of three local advisory boards.

The concessions of visitor services will be given, whenever possible, to the private sector (mainly micro-enterprises) of adjacent communities to increase income in these communities. This was an arduous but important activity directly linked with the objectives of generating a series of valued added activities from the ACCVC's natural resource base. Considerable time was devoted to achieving this requirement in the actual contracts due to the new legal concepts it implied.

B3. Status of FUNDECOR's Outputs

Table III-4. Summary Overview of FUNDECOR'S Management of Protected Areas

Planned LOP Output	Status July 1994	EOP Status
Technical management & administration of parks	Significant improvements introduced; planning for SINAC	Completed; SINAP implemented
Integrated management plan	Nearing completion (fall, 1994)	Completed
Critical park boundaries defined and marked	Critical boundaries identified; < 10% marked	Likely to be completed
System of visitor services	25% completed	Mostly completed
System of protection of natural resources of ACCVC	50% completed	Completed, except some adjustment required
Plan for research on conservation of biodiversity and cultural heritage	Two separate research plans have been prepared	Implementation of research plans begun
Community participation in park management, generating economic benefits	> 75% completed	if local advisory committees formed, Completed

B4. Comments and Observations

FUNDECOR made significant changes in FORESTA's logical framework, beginning with the appointment of the second Administrative Junta and a new executive director in 1992. The changes in the "management of protected areas" component of the project are noted in detail in Section II.C5. These changes resulted in a much more manageable set of activities and more realistically achievable outputs. They also resulted in the reallocation of funds among different line-items.

The revised FUNDECOR logframe emphasized organizational and operational changes in the technical management and administration of national parks within the ACCVC. Significant changes have successfully been introduced and will continue to be implemented. FUNDECOR is a fully collaborative partner in the planning for SINAC and its legislative approval, which is anticipated before the end of 1994.

FUNDECOR revised the output for park boundary demarcation from 100 percent of critical areas to 50 percent. This revised target is still not likely to be achieved, primarily due to the high costs. The technically required expansions and contractions of park territory will have been identified by the PACD.

The output for the preparation of an integrated management plan for national parks is the same as the FORESTA Project Paper. As noted earlier, the plan is nearing completion by ACCVC and relies significantly on the FUNDEVI plans. Annual work plans are being implemented in accordance with emerging guidelines.

The revised FUNDECOR logical framework combines the two sets of outputs from the Project Paper related to the provision of visitor facilities and services. The revised output is more coherent and integrated. Significant progress has been made in renovating existing physical infrastructure and constructing new ones. (This is discussed in Section III.B2.) This output will be achieved for the most part, except for the training component, which is a pervasive weakness throughout FORESTA activities.

A critical output to achieve long-term sustainability within the ACCVC is the preparation and execution of an efficient system of protection and vigilance for the conservation of the natural resources of the region. Patrols have been equipped with appropriate vehicles and radios. In fact, all of the activities within the ACCVC are linked with two-way radio communications, a major accomplishment of the project. Some training was provided to some of the staff consulted, but in many technical and operational areas they did not appear to be as prepared as they should for their job. This same observation was made regarding others assigned to the project. The real limitation to achieving adequate protection, not only of the national parks but also of the natural resources of the ACCVC, is the lack of followup in the judiciary system to ensure that cutting and lumber violators will be punished once ticketed by guards and ranger patrols.

Two separate research plans covering biodiversity and cultural resources have been prepared. The first is the Five-year Scientific Research Program of the ACCVC, which is more of a strategy document emphasizing policy, objectives, and goals than a detailed plan for conducting specific research. The importance of continued archeological excavation and restoration throughout the five-year period is recognized; however, the research methodology is not specified and the desperate need for scientific expertise for archeological research is not cited. Other important research topics and appropriate research methodologies are not specified. The second is the document by Hazlett and Lehmkuhl (1994), "Development of Programs to Inventory and Monitor Biodiversity in the ACCVC." FUNDECOR intends to use this as a guiding framework for implementing much of the biodiversity monitoring program.

FUNDECOR's approach will essentially be one of co-sponsorship, collaboration, some cost-sharing, and coordination of research programs, rather than conducting research itself. FUNDECOR will also not hire consultants to do inventory and monitoring, but will rely on cooperative agreements with existing research institutions. This is the appropriate way to do these tasks. Such examples have already begun, as in the case with OTS. Dialogue has begun with the National Institute for Biodiversity (INBio), in part because of the high costs associated with biodiversity inventory and research.

There is an important component of community participation in FUNDECOR's logical framework. The emphasis of this output was focused on local job participation within the concessions financed under the various bids for the new tourist services to be developed. There are a variety of innovative efforts FUNDECOR is introducing to help stimulate local

employment, including special incentives in the bids for the services under licitation. Many of these are now in the process of public bidding. Some important contributions responsive to one of the principal aspects of this output are anticipated. In addition, some interesting conservation/development activities in the ACCVC facilitated via local organizations are underway. The Asociación para la Creación del Parque Nacional Juan Castro Blanco is a community-based organization that was instrumental in having the park officially declared. Donations were provided to help consolidate the park and purchase privately held land (C15 million). Another effective community-based group is the Acuíferos de Guapiles, which received a C20 million grant from GOCR to purchase land for aquifer protection (C10 million are for land acquisition within the ACCVC).

C. Management of Natural Forests for Production

C1. Status of Project Paper Outputs

Table III-5. Summary Overview—Management of Natural Forests for Production

Planned LOP Output	Status, July 94	Probable EOP
Forest management	Almost Complete	Complete
Forest management standards	Need refinement	Will need refinement
Enterprises	No progress	Doubtful
Logging Guidelines	Need refinement	Complete
Integrated industries	No progress. Eco-Camps as subs.	Doubtful, Eco-Camps possible

C2. Comments and Observations

As an introductory observation it is important to note that FUNDECOR directed considerably more attention to this component, and overall, the achievements are noteworthy. The FORESTA Project Paper mentioned that at least 5,000 ha of forests would be under sustained forest management plans. Following the program review exercise, FUNDECOR has placed special attention on the forest management activities as being one of the most cost effective means to begin reversing deforestation rates. They established a medium-term objective of bringing 30,000 ha of the 97,000 to 137,000 ha of natural forest in the ACCVC buffer zone under sustainable management for production or protection. FUNDECOR currently has 64 landowners with approximately 9,200 ha signed up to participate in the forest management program.

FUNDECOR should be congratulated for the high priority given to this activity. This achievement would not have happened without the utilization of the favorable land use policy incentives, innovative management systems, and cost effective approaches employing the latest technologies—all managed by a small, permanent, highly dedicated field staff. Some of the most interesting of the many special features employed include: (1) the contracting via a rapid system of FUNDECOR trained/project proven experts to develop management plans

using standard models, (2) the use of GIS to help prepare the actual plan to include tree identification and property line verification, (3) extensive computer applications to facilitate quality control and cost reductions on all aspects of the management plan, (4) the use of para professionals and training courses for loggers, (5) special assistance in facilitating more rapid resolution and acquisition of land titles, (6) the enthusiastic dedication the forestry staff maintains to achieving these objectives, and (7) the overall management controls introduced to assess costs and interject appropriate improvements.

However, given the newness of the management approaches and systems employed, the small regular staff already heavily employed, and the large increased number of hectares projected to be brought under this activity, special attention should be directed to ensure systematic inspection is provided. Landowner adherence to the plan, as formalized in the signed contract, is crucial to overall objectives. The team suggests that the periodic monitoring of FUNDECOR's forester managers contemplate this expanded inspection required under each plan. The evaluation team found no evidence that such inspection was not happening, but cautions that this could be a special issue soon and as a consequence, additional forestry staff would have to be hired.

FUNDECOR has worked with the DGF to streamline the process of preparing and approving management plans. The DGF has agreed to changes that eliminate unnecessary requirements while improving the quality of the approved plans. As a result of this effort and the computerization of portions of the management plans and the use of technologies such as GIS and GPS, FUNDECOR reduced the costs of preparing the management plans from C7,000 in 1991 to C4,500.

FUNDECOR has developed technical standards for management and developed practical logging guidelines. At FUNDECOR's initiative, including FUNDECOR's sponsorship of three workshops to analyze DGF's forest management guidelines, the DGF has modified its forest management guidelines. Improved procedures are now in place. CATIE, through an agreement with FUNDECOR, has established plots to monitor harvesting impacts in one of the managed forest tracts. Additional research and monitoring will be needed to further refine both the management standards and logging guidelines and to assess the impact of management on biodiversity. This research and monitoring will need to continue after the FORESTA project has ended.

FUNDECOR has, at least temporarily, abandoned attempts to develop an enterprise based on integrating timber harvesting and wood processing along the lines outlined in the Project Paper. The project's objective of establishing a wood products based enterprise in a short project with no funds budgeted to support investments by the enterprise was probably overly optimistic given the fragmented nature of forest ownership in the ACCVC. However, given the important FUNDECOR strategic efforts to add value to forest and land resources, FUNDECOR should continue to explore opportunities for increasing the value of the forest to its owners and the residents of the ACCVC. The ecotourism proposal appears to be one such opportunity.

Other examples related to the difficult challenges associated with increasing local incomes and the generating of greater value from forest products have been mentioned. A new effort related to "carbon sequestration" initiatives that would link U.S. energy generators

with forest land purchases is only the most recent proposal in this area. However, one of the most notable ongoing examples relates to FUNDECOR's forest auction system.

Starting in 1993, FUNDECOR began advertising the availability of timber for harvest and requesting sealed bids for the rights to harvest timber from participants' forests. So far these timber auctions have increased the stumpage price paid for timber to cover FUNDECOR's costs for the management plan preparation and approval process (costs normally assumed by the logger) as well as marketing costs. This innovative timber marketing system has resulted in increases of approximately 45 percent in the price paid for standing timber in its first year. FUNDECOR actually recovers most of its costs from the forest management subsidy that the government pays to the landowner while the landowner's income is increased as a result of the increased stumpage price and the efficiencies that FUNDECOR is introducing into the system. This new system is now being studied for application in other parts of Costa Rica and Central America.

C3. Status of FUNDECOR'S Outputs

Table III-6. Summary Overview—FUNDECOR's Management of Natural Forest for Production

Planned LOP Output	Status, July 94	Probable EOP
Forest mgmt. guides	Draft guide	Complete
Mgmt. plan guides		Complete
Forest enterprises	Eco-Camp proposal	Possible completion
Forest mgmt.	Almost complete	Complete
Ecotourism	Pending approval	Possible completion

C4. Comments and Observations

As in the case of the guidelines for logging and the forest management standards discussed in subsection C2., above, FUNDECOR, in collaboration with other institutions, will publish practical guides to forest management and improve the technical guides for preparing management plans by the end of the year. FUNDECOR is moving forward and coming to closure on these important activities, building on more than ten years of work done by other Costa Rican institutions. However, as in the case of the logging guidelines and the forest management standards, FUNDECOR will need to collaborate with some of these same institutions in research and monitoring activities. This is an important follow on research and monitoring activity that should continue after the FORESTA project ends.

The different focus of the forest enterprise activity as originally planned was altered. FUNDECOR has developed a plan to engage the owners of 20,000 ha of natural forest in the ACCVC in an ecotourism enterprise that will provide the participants with increased income derived from their forests. Under this plan, "wilderness refuges" will be constructed in three regions within the ACCVC and a designated tourist route or routes will connect these sites.

Participants in the project will share in the project's income on the basis of one share per hectare of forest subscribed to the program. Initial participants will be drawn largely from the participants in the natural forest management program. FUNDECOR would invest \$200,000 in the construction of refuges and trails and would recover its costs during the first three or four years of operation according to the business plan. The proposal is now being reviewed by USAID.

While the principal beneficiaries of this activity would be the members of the enterprise (the landowners), residents of the ACCVC would also benefit from employment at the Eco-Camps (guides, research assistants, caretakers, etc.), increased economic activity in the area, and the opportunity to become involved in tourism enterprises (restaurants, raft and canoe rentals or trips, craft sales, sales of agricultural products, medicinal and ornamental plants, etc.). The evaluation team is of the strong view that this activity has some very important complementary merit related to the FORESTA objectives. Further, given the limited "value added" opportunities observed in the forest area, this pilot activity has significant merit and should be rapidly reviewed and endorsed.

D. Integration of Trees on Farms

D1. Status of Project Paper Outputs

Table III-7. Summary Overview—Integration of Trees On Farms

Planned LOP Output	Status, July 94	Probable EOP
Plantation forests	620 ha of plantations	Probable completion
Agroforestry systems	Little progress	Will not complete
Grassroots organizations	Some progress	Will not complete

D2. Comments and Observations

As discussed earlier, the Project Paper provides for a select number of targeted forest cover retention/buffer zone development activities in this component. Due to the relatively limited resources provided this component, the inherent challenges associated with each activity, and the decision by the second Administrative Junta to focus FUNDECOR's efforts on more immediate impact activities described in III.C., the output indicators are not at the level originally planned.

The project paper called for at least half of the Class VIII and IX land not covered by natural forest to be covered by forest plantations by the end of the project. The evaluation team was not able to obtain an estimate of the area of deforested Class VIII and IX in the ACCVC, but assumes that a very large percentage of the 98,000 ha in pasture, crops, "charral" and plantations in 1992 does not have the capacity to sustain agricultural production. Under an appropriate regime of land use and forest policies, much of this land would be more productive if converted to forest use. A conservative estimate is that at least 35,000 ha of deforested privately owned land in the ACCVC should be converted to forest

uses to protect land and water resources. To date FUNDECOR has been responsible for establishing over 822 ha of largely native species plantations in the ACCVC via a very effective private sector seedling and plant stock development project. The Sarapiquí Cantonal Agricultural Center (CACSA), with very strong support from FUNDECOR, has been responsible for the reforestation of about 400 ha. CACSA has agreements with its members to plant another 152 ha this year, and FUNDECOR plans to plant 164 ha. Earlier, FUNDECOR provided financial and technical assistance to UPAGRA in Guacimo to develop a reforestation program that continues to function with only technical assistance from FUNDECOR. UPAGRA's program is not included in the numbers cited above. In addition, FUNDECOR is now assisting the Siquirres Cantonal Agricultural Center (CACSI) to develop a reforestation program. By the end of the year approximately 1,100 ha will have been reforested through FUNDECOR's efforts.

While this number is very small when compared to the needs, FUNDECOR's accomplishments in organizing landowners and other residents of the zone to develop the native species reforestation program are impressive. First FUNDECOR worked with the Organization of Tropical Studies (OTS) to base their plantation program on the eight years of native species research carried out by OTS and the DGF at OTS' La Guaria station. FUNDECOR entered into an agreement with OTS to select seed trees for the eight species selected for the reforestation program and for OTS to conduct progeny trials on these seed sources. FUNDECOR developed a program where they pay the owners of seed trees not to harvest these trees. When these payments are combined with an annual payment for seed collected from the trees, the trees are worth more to the owner standing than felled. FUNDECOR has a contract with an individual to collect seed from these trees, and with OTS has trained the seed collector to understand the flowering and fruiting cycles of the selected species.

Early in the project, FUNDECOR identified several potential nursery operators and sent them to a series of training courses, including a pest management course carried out by the Escuela Agrícola Panamericana in Honduras. FUNDECOR provided technical and financial assistance to aid eight nursery operators, including CACSA, to begin small nursery businesses. FUNDECOR signs annual agreements with nursery operators to purchase an agreed upon number of quality seedlings. Four nursery operators continue to participate in the program. FUNDECOR had hoped to discontinue financial assistance (advance payment for seedlings) to nursery operators this year but found it necessary to continue support to CACSA and two of the operators this year. In fact, FUNDECOR now recognizes that nursery operators should insist on some advance payment to guarantee the seriousness of the purchaser. FUNDECOR's nursery operators sell their excess production to other reforesters in the ACCVC and in nearby areas such as San Carlos and Limón. FUNDECOR's most successful nursery operator recently expanded his nursery and has become involved in the reforestation business in Limón.

FUNDECOR has concentrated its agroforestry buffer zone forestry activities in the Canton of Sarapiquí. A small percentage of the ACCVC's farmers have participated in FUNDECOR's agroforestry activity, partly due to the limited budget for this component, competing and changing priorities, the limited number of agroforestry experiences known in the region, and important constraints as viewed by FUNDECOR as they relate to the following socioeconomic factors: (1) employment activities in the zone make agroforestry

difficult, (2) low prices for agricultural products make agriculture and thus agroforestry unattractive leading to abandonment or reforestation of farms, and (3) agroforestry is intensified; in general, Costa Ricans prefer extensive methods.

The evaluation team is aware of the inherent difficulties associated with agroforestry. In addition, many lessons have been learned since the time the Project Paper was developed. In fact, to help guide its recommendations the team has referred to many studies, particularly the World Bank's technical paper by P.K.R. Nair, "The Prospects for Agroforestry in the Tropics." The most salient points from this worldwide syntheses (albeit heavily Africa focused) have been condensed in Section V, which deals with global lessons learned. From these analyses the team concludes that there are numerous examples where sustainable agroforestry systems have been introduced in conditions similar to those observed by FUNDECOR in the ACCVC. The team concludes that while agroforestry will not be an easy task, they are in agreement with the recommendations presented in September 1992 agroforestry study, "Evaluación de las Necesidades Agroforestales de las Fincas en un Sector del Distrito La Virgen Canton de Sarapiquí" by the U.S. Forest Service team, that such an activity is needed.

The bold biodiversity conservation and related deforestation ameliorating objectives FUNDECOR is confronting will require the widest range of land use options. The evaluation team believes that during the remaining portion of the project, this activity should receive more attention. The FUNDECOR staff needs to be armed with as many approaches as possible (including natural forest management, assisted natural regeneration, agroforestry, and the establishment of forest plantations). (One could also argue that more commercially viable agriculture practices also be developed.) Admittedly there are a series of legitimate issues related to appropriate strategies, capacity and costs, particularly at this juncture of project evolution. Suggestions are provided in Section VI.

The U.S. Forest Service team found some promising agroforestry in the La Virgen district and the evaluation team saw agroforestry in other areas of the ACCVC. One of the cattlemen near Horquetas had introduced trees into one of his pastures. He claimed that the leguminous trees he had introduced improved the performance of his pastures and improved milk production. Since the trees used by the rancher were from Guanacaste, his system could probably be improved by merely substituting a local leguminous species with commercial potential. The team also met with OTS researchers working with farmers in Sarapiquí to improve agroforestry systems.

FUNDECOR has done some important grassroot organization, concentrating on those activities where specific FORESTA service could be improved. Earlier examples have been provided. Within this activity, FUNDECOR has provided encouragement and technical assistance to AGROFORSA (the Agriculture and Forestry Association of Sarapiquí), a group of ex-logging truck operators now transporting bananas as a result of the decline in logging following the rapid deforestation of the area following the opening of new roads. This group is promoting the planting of trees along the banks of the Sarapiquí and Sucio rivers to arrest bank erosion. Community leaders in and around Puerto Viejo certainly appear aware of such concerns and supportive of activities that address them. Articles about FUNDECOR have become a regular feature of the bimonthly magazine *Sarapiquí al Día*. This awareness is largely a result of FUNDECOR's activities and provides fertile ground for future progress.

These are significant contributions, particularly given the relatively short duration of the program. However, given the major challenges confronting the zone and the limited resources to address these, a broader, more strategically focused community outreach program is needed. This point is elaborated further in Section VI.

D3. Status of FUNDECOR's Outputs

Table III-8. Summary Overview—FUNDECOR's Introduction of Trees on Farms

Planned LOP Output	Status, July 94	Probable EOP
Reforestation and agroforestry	Some progress	Partial completion
Silvicultural guides	Almost complete	Complete
Beneficiaries trained	Some progress	Unlikely completion
Forest cover maintained	Significant progress	Unlikely completion

D4. Comments and Observations

As the above table and the discussion in subsection D2., above, illustrate, FUNDECOR has taken innovative actions to implement some of the activities in this component. The use of OTS research to develop a native species planting program, an agreement with OTS to select and test seed trees, payments to seed tree owners, a seed collection contract, technical and financial support for fledgling nursery businesses, collaborative arrangements with CACSA and CACSI, and assistance to landowners in arranging for reforestation and obtaining DGF approval and subsidies are but a few. However for the reasons stated above, additional challenges remain.

The goals in reforestation and agroforestry were reduced during the program review by the Administrative Junta. Therefore, by the end of the year FUNDECOR will have met all but one of its goals under the reforestation and agroforestry output. Over 1000 ha of deforested land in the ACCVC will have been reforested, with important participation by CACSA and CACSI. Three or four nurseries will be producing over 1.5 million seedlings per year. The seed supply of native tree species is assured, at least for the time being. However, it is the team's opinion that the absence of a strategy or plan, based on the most relevant of current systems now being utilized and promoting their gradual introduction (including the introduction of a select number of promising models), will be a limitation for achieving broader FORESTA objectives.

FUNDECOR and CATIE are collaborating to produce silvicultural guides for at least two of the ACCVC's native species by the end of the year. Laurel and alder are used in FUNDECOR's reforestation programs but neither is on the preferred list of native species. Both species are commonly used in agroforestry systems elsewhere in Costa Rica and Latin America. The Costa Rican National Museum and the National Herbarium have published several issues of *Trees and Seeds from the Neotropics* with financial support from

FUNDECOR. In addition, FUNDECOR is participating in at least one network of researchers and others promoting native tree species plantations and research.

FUNDECOR's training programs have been done on a one-on-one basis with a comparatively small but growing percentage of the ACCVC's landowners. Through such targeted interventions, some of the major productive inroads reported have occurred. While such an approach has had numerous activity-specific impacts, the increased body of international experiences indicates that there are more cost-effective and sustainable approaches that training can help facilitate. Given the pressing array of land-use problems, a broader range of beneficiary training programs are warranted to more directly impact land use and conservation of natural resources in the ACCVC. Over the medium to long term, the team feels that such programs will need to be a part of the FUNDECOR program.

To reverse deforestation rates and stabilize and maintain forest cover within the ACCVC by 1997—a truly ambitious almost heroic objective—FUNDECOR has taken on many significant activities. As described above, a variety of well conceived activities, particularly in the forest management component, have been introduced. However, due to the magnitude of the task and the limited time and money remaining, the evaluators do not believe that FUNDECOR will achieve its goal of stabilizing the area's forest cover by 1997. Nevertheless, we are extremely impressed with the important progress that has been made.

E. Operations and Management

Recognizing the numerous challenges this pioneer institutional development/forest based conservation and development based foundation would be required to address, project designers provided targeted technical assistance to FUNDECOR. As soon as practical, but prior to the legislation actually ratifying FUNDECOR, a contract was to have been negotiated to provide technical and administrative expertise to support FUNDECOR, to assist with initial implementation actions, and to handle funds. These very special "line like" responsibilities also include assisting the administrative board and the executive director with the selection of FUNDECOR's staff.

On March 7, 1991, a \$1,175,000 technical assistance contract was signed with Price Waterhouse (who had a subcontract with CATIE) to provide 198 person-months of long- and short-term advisory support in three major tasks; (1) institutional development, (2) administrative and finance, and (3) forest and park management technical assistance.

SECTION IV

COLLABORATOR CONTRIBUTIONS AND STAKEHOLDERS

For FORESTA to achieve its vitally relevant program objectives, a series of collaborative relations must be established and maintained with a variety of key institutions. FUNDECOR recognizes that its small staff and mandate require that it facilitate coordination, provide management support, and subcontract to obtain the most appropriate services. These relationships or partnerships, based on mutual trust and benefit, are essential, particularly during this initial phase of FUNDECOR's growth. Also, similar relationships must be established with the principal stakeholders. This midterm assessment examined progress in establishing strong relationships with both FUNDECOR's collaborators and stakeholders.

During the evaluation, individuals from USAID, MIRENEM, and Costa Rican scientific and education institutions were consulted. A brief overview of the collective impressions of their role in the program and suggestions to improve overall performance was collected. Given the terms of reference, special attention was directed towards USAID. In addition, a synthesis from the interviews with such FORESTA stakeholders as FUNDECOR participant clients, staff, and GOCR representatives as to how they view the FORESTA program is included.

A. Collaborators

A1. USAID Role

From the inception of the FORESTA concept, USAID has played a crucial role in advancing the FORESTA "approach." Many Costa Ricans enthusiastically endorsed USAID's efforts. While some complained about USAID's bureaucratic process, which they got to understand better as time passed, most strongly agreed that one major reason for progress has been the combination of USAID's interest, persistence, and flexibility. Further, the recently departed project officer was a key element in USAID's management team for transmitting this interest. She had become a critical element through her involvement at all levels of FUNDECOR's operations, including Junta and Grupo Base meetings. That constant information dissemination and program facilitation role has been recognized as a very positive contribution.

While all interested parties know of USAID's departure and the down sizing operation presently taking place. FUNDECOR and GOCR collaborators are concerned by the reduced USDH presence and what they perceive as reduced interest in FORESTA operations. Leaders conclude that many significant activities must be done prior to the PACD and look to USAID for support and in some instances, leadership.

A2. USAID Suggestions

The team recognizes that these are not easy times due to declining USAID staff levels and competing project priorities. However, based on the accomplishments in Sections VI and VII and the tremendous potential for truly significant accomplishments that could be realized after the PACD, the project merits special attention from USAID. While this opportunity obviously must be examined in light of other needs, it is our view that USAID will be missing a rare opportunity to have a lasting impact on sustainable development in Costa Rica. Some initial thoughts are provided.

Unless a highly committed USDH who can provide at least half time coverage over the next 20 months period is available, a special "USAID FORESTA Program Task Force" should be organized. Currently, the mission program officer, supervisory agricultural development officer, and the Price Waterhouse technical advisor are interacting. Clearly defined roles and responsibilities and systematic reporting functions to USAID and FUNDECOR management need to be developed. Responsibilities did not appear to be well defined and important information and perceptions covering operations and strategy did not seem to be with all principles. The team offers these specific suggestions. (1) Define the types of technical, process, and policy needs to be addressed and a definition of responsibilities for actions to facilitate progress. This process needs to ensure that regular meetings take place from which follow-up monitoring activities and action responsibilities are delegated. The technical advisor should have access to e-mail communications. (2) Hold meetings at least bi-weekly between the FUNDECOR Task Force leader and the mission director and also with the FUNDECOR executive director to review progress, determine priorities, assign responsibilities for priority and how the highest priority tasks can best be done. (3) Relieve USAID from the need to approval all purchase orders and contract approvals that are urgently needed. This is a Cooperative Agreement with an organization USAID wants to soon see operate on its own. Well structured and regularly monitored management procedures are adhered to. Precious USAID management time could be better spent by focusing on matters of greater importance to both institutions. The priority actions and revised outputs that the team proposed as essential for creating a sustainable FUNDECOR addressing the FORESTA objectives will require more directed attention and guidance.

A3. MIRENEM Role

The major collaborators within the Ministry of Natural Resources are the National Parks Service (SPN), General Forest Directorate (DGF), and the Wildlife Service (SVS). It almost goes without saying that there is major collaboration between FUNDECOR and these major GOCR agencies.

This has not always been the case. There were many false expectations within government agencies when FUNDECOR was created with an apparently large operations budget. There were many disappointments and resentments when money did not flow easily and readily from FUNDECOR. There was an evaluation of what FUNDECOR and should do, and how to do it. A clearer understanding of the role of FUNDECOR emerged and the working relationships between GOCR and FUNDECOR steadily improved thereafter. The relationship with ACCVC, including SPN, is strong and consistent and is evident in the daily

operations of the ACCVC. Many examples of this working relationship are provided throughout this document.

The joint activities with the DGF are less conspicuous, but no less important. Several examples follow. FUNDECOR provided DGF (and SVS) with office space and computers at their field site in Puerto Viejo; it is now providing hardware and software to the DGF offices in San Jose and Heredia. FUNDECOR has organized two recent workshops with DGF and pays for training of DGF personnel in Costa Rica and abroad.

There needs to be much more collaboration with the SVS, particularly related to the impacts of forest management practices on wildlife, primarily those species that play key functions in forest ecosystems (such as pollination and seed dispersal).

A4. Research and Educational Institutions

FUNDECOR recognizes the fundamental importance of the role of research in scientifically based land-use management. FUNDECOR's approach will essentially be one of co-sponsorship, collaboration, some cost-sharing, and coordination of research programs, rather than conducting research itself. FUNDECOR will not hire consultants to do inventory and monitoring or other kinds of research, but will rely on cooperative agreements with the existing world-class research institutions in Costa Rica.

FUNDECOR's collaborative relationships with some of these institutions are extensive and a detailed overview is provided in Annex D. With CATIE for example, there is a strong relationship that the team feels will continue to be a source of mutual benefit to both institutions. Their relationships with OTS are becoming increasingly important and productive. With the Costa Rican Institute for Technology (ITCR), technical assistance and assistance in forest and seed management are provided. Other significant linkages are maintained with INBio, EARTH, etc. These are all important linkages that serve as a good foundation for the expanded activities envisioned in the future.

B. Stakeholder

B1. FORESTA Beneficiaries

Due to time limitations and the fact that many of the landowners participating in the project do not live on their land, the team's small sample of participants interviewed focused on those landowners participating in the project's forest management and plantation activities who live in the northern section of the ACCVC. Two absentee landowners (professionals working in San Jose) participating in the CACSI program were interviewed, as well as all three of the nursery owners receiving assistance from FUNDECOR. Most of the persons interviewed appeared to be persons of modest means—living in modest homes (one, with 31 ha of forest under management lives in a primitive cabin and speaks relatively uneducated Spanish).

All participants interviewed were pleased with the technical and financial support that FUNDECOR had provided to assist them with management of their land or with the production of tree seedlings. Landowners participating in the forest management program explained that they enjoy passing time in their forests and that FUNDECOR gave them the opportunity to harvest trees from the forest without destroying it. They explained that when a landowner contracts directly with a logger, without FUNDECOR assistance, the loggers destroy the forest. One landowner participating in the forest management program and another carrying out reforestation expressed interest in silvo-pastoral systems.

All landowners expressed great satisfaction with FUNDECOR's orderly approach to getting the job done. Forest owners were extremely pleased with the condition of their forests following harvesting, with the income received from the forest, the knowledge that they would be able to harvest again in a few years, and the fact that FUNDECOR was willing to finance the cost of preparing management plans and other pre-harvesting costs.

Nursery owners also expressed great satisfaction with the technical and financial support provided by FUNDECOR. All had participated in training programs arranged for by FUNDECOR, including training in pest management. Two did complain about the prohibition on the use of MIREX to control leaf cutter ants, an indication that they were abiding by pesticide use guidelines even though they may not have understood the need for them.

B2. FUNDECOR Staff

At all levels, FUNDECOR personnel were observed to be extremely committed to the project's objectives. All expressed a sincere interest and almost a sense of mission to this program, which they believe has the potential to have positive impacts on Costa Rica's future. They recognize that it is a very complex undertaking and that discipline and dedication are needed. Further, by working together with area landowners and residents, much good can be accomplished. All seemed very absorbed in their tasks and related them to higher objectives. The esprit is contagious!

Some were concerned that the original FUNDECOR mission was not being pursued as aggressively as it should be. Specifically, some opined that while it is a very important activity, to be responsive to this broader mission, their activities would have to go beyond the priorities given to the natural forest management activity. Also, since the endowment is far from being established, this threatened FUNDECOR's long-term institutional sustainability and they would have to begin to look for employment elsewhere. They regretted this but at the same time felt that the experiences learned would serve them well in the current job market.

B3. GOCR Representatives

Through numerous meetings held with a cross section of interested political and respected professionals, the team got the clear message that good things were happening under the FORESTA program. All were appreciative of the progress made in light of major challenges that the program was confronting (due in part to their understanding of the limited progress made during a variety of past efforts with notable failures) and the inherent

difficulties in starting with a highly experimental approach in such a politically charged sector. No one spoke negatively about the program or its administration. Rather, given the sense of environmental crisis and their positive, even laudatory impressions of FUNDECOR's approach and performance, many felt that this was a project that needed to succeed. USAID was repeatedly praised for the leadership role it had provided in the sector and particularly for the FORESTA project.

SECTION V

GLOBAL LESSONS LEARNED APPLICABLE TO THE FORESTA EXPERIENCE

Before commencing this section of the midterm evaluation, which deals with broader strategic and institutional considerations, a brief discussion of recent global "lessons learned" as they apply to FORESTA is provided. These should, however, not be taken as approaches that have direct application in all instances. Rather, they provide points for reflection and comparison.

Although still relatively new, the pioneer efforts launched under FORESTA embraces the convergence between (1) conservation and development strategies and (2) public and private sector institutional strategies. Some aspects of these are now a little better understood than they were a decade ago, and a base of international experiences exists to better assess FORESTA.

A. The Integration of Conservation and Development

The team reviewed the book by Michael Wells and Katrina Brandon, "People and Parks," a review of 23 highly acclaimed projects. The most important conclusions from their study is that the most successful programs combine the most difficult aspects of both rural development and conservation management. However difficult this may be, without such twinning, sustainable development will not occur. They further conclude that success within this strategic context is most likely to occur when three interrelated elements are introduced: (1) protected area management, (2) buffer zone development, and (3) local social and economic development. Beyond these strategic and operational recommendations, a series of common attributes to program success were identified.

A1. Stage Setting Preconditions

To conserve biodiversity, larger geographic, social, and economic environments must be incorporated. Five facilitating preconditions were deemed important: (1) a serious political commitment to this effort must exist at the local and at the highest level of central government; (2) legislation and jurisdiction to permit agile management under various resource unit boundaries and land use systems must be provided; (3) project development components should be coordinated with regional development initiatives; (4) secure attention to land ownership and other resource access rights of the project's intended beneficiaries, and (5) government institutions have to reorient their staff toward a more people centered approach that embraces all resource users.

A2. Scale of Project Operations

Most of the projects reviewed by Wells and Brandon (1992) were operating on too small a scale to address the many immediate problems they are trying to resolve. Unless the scale of operations is substantially increased, prospects for biodiversity conservation will continue to deteriorate.

A3. Participating Organizations

One of the clearest observations is that to address the enormously complex challenges cited, significant collaboration among governments, conservation groups, researchers, development agencies, and donors must be encouraged. The issues are complex and in many cases new biological processes and new operational systems are being introduced and relevant expertise must be sought.

A4. Local Participation

The sustainability of project advances strongly depends on the effective participation of local people in those activities that affect changed land use practices, economic incentives, and behavioral adjustments.

A5. Secure Financial Support

Long periods are needed to develop appropriate operational and technological interventions and to elicit local participation for generating long-term support. Project funding needs should be phased over time. Financial self sufficiency will not be achieved after only a few years.

B. Agroforestry Situation

It is only over the last decade or so that agroforestry has become such an important topic in natural resource management and development projects. There are numerous case site research reports and some project specific reports but few broader lessons learned synthesis reports. One exception, is the World Bank's report, "The Prospects for Agroforestry in the Tropics," written by P.D.R. Nair. The executive summary of this report is included in Annex E.

While the report notes that agroforestry is widespread in almost all ecological and geographical regions of the tropics, several important other conclusions emerge:

- Agroforestry systems are as many and varied as their functions, roles, and outputs.
- Ample scientific evidence indicates that the benefits derived from agroforestry should be considerably increased by appropriate scientific intervention.
- Scientific studies in agroforestry have been limited, and thus the potential of agroforestry remains vastly under-exploited.
- The current trend in agroforestry development shows an imbalance between large-scale development projects and inadequately low levels of research and educational support.

C. Private Nonprofit Institutional Approaches

The multitude of complex activities and services related to implementing the two strategic thrusts highlighted in the introductory part of this section must be aggressively promoted in cost effective and systematic approaches. These are not activities that can be provided quickly by most public sector organizations exclusively. A series of nongovernmental, non-profit organizations have been acquiring experience to provide long-term continuity, relevant technologies, free-standing independence, agile market responsive services, and networking with a larger number of complementary service purveyors from government and nongovernment institutions. Since this form of institutional development is so new, the forms so diverse, and universal applications so difficult to prescribe, several studies were reviewed to help assess FUNDECOR's situation.

Of the various researchers reviewed, Thomas Carroll's *Intermediary NGOs—The Supporting Link in Grassroots Development* was the most relevant to the evaluation. He analyzed 30 Inter-American Foundation (IAF) "intermediary organizations" regarded by the IAF as effective and competent. The operational and organizational attributes of the stronger performers are presented. While the team recognizes the multifaceted nature of such organizations does not always produce general conclusions and FUNDECOR is not exactly in the same category, there are some observations we felt had relevance to FUNDECOR.

C1. Organizational Strategies and Approaches

Functional specialty and a small size staff have proven to be important qualities. Organizations that implement a limited number of tightly connected projects performed better than those undertaking a series of loosely connected or unconnected series of activities.

C2. Financial Well Being

Not surprising, a solid financial base is a basic requisite for performance; according to the study, this was usually a diversified portfolio with core costs covered. Access to a secure core funding source is a tremendous boost since most donors have project-focused investment policies.

C3. Motivation and Leadership

Both competency and commitment from staff are needed. In isolated project areas where personal and family sacrifices are required, a higher sense of mission and common purpose are important factors. Successful organizations have creatively responded to this need. Inspired central leadership, particularly during the early years, is a definite positive factor. Leadership that exhibits a strong personality, commitment, and drive to provide focus, and which demonstrates capacity for constructively working external alliances are needed. The top organizations were able to weather serious internal strife and move on.

C4. Organizational Dynamics

While focusing on well defined goals and strategies are important, this attribute takes time to develop. A coherent agenda can be modified over time to include new or modified

methods based on changing needs. The core programs of the better organizations were maintained instead of becoming too dispersed. Fine tuning was ever present. The best organizations responded positively to beneficiary input, usually via informal mechanisms, including day to day interaction.

C5. Capacity Building

There is a constant need to ensure that the most relevant and cost effective technical and managerial skills are being provided to project employees and intermediaries, including government staff. One of the inherent problems of all intermediary organizations and, in many cases, the NGOs themselves, is the need for appropriate training and related career development activities. The provision and management of staff training to ensure that quality services are provided is an important characteristic of successful organizations.

SECTION VI

INSTITUTIONAL STRUCTURE AND ANALYSIS OF FUNDECOR

The mission's scope of work required the team to direct considerable attention towards assessing FUNDECOR's institutional structure and its overall operational effectiveness. Further, FORESTA designers concluded that "the most important accomplishment of the project will be strengthening FUNDECOR to become a permanent self-sustaining private organization responsible for promoting, sponsoring, and collaborating in efforts to control and use the natural resources of the ACCVC."

The team dedicated considerable efforts to this section and consulted a large number of manuals, internal documents (including the minutes of the Junta's meetings), legal references, interviews, and other information sources. This section presents the team's findings as they relate to (1) institutional, organizational, personnel management, and financial systems, (2) current financial situation, and (3) programming and monitoring systems. Observations regarding the team's reaction to each of these points are also provided. This review closes with an overall assessment of FUNDECOR's institutional capability for receiving the endowment.

A. Legal Mandate

FUNDECOR was created in March 1989 under GOCR's foundation law. Its mandate is broad in scope, goes beyond FORESTA's PACD and program objectives, and also beyond the geographic boundaries of the ACCVC. It was established as a "private entity." Its functions are: (1) plan overall land use in its geographic area of responsibility, with special consideration for sustainable uses that are compatible with the protected areas; (2) protect and manage the natural protection areas of the ACCVC; (3) promote sustainable forest management in the buffer zones around the protected areas, integrated with efficient industrial processing of wood; (4) control reforestation and promote deforestation; (5) carry out programs of extension, environmental education and training; (6) carry out administrative tasks necessary for management of the natural resources, such as contracting for permanent and temporary personnel, procuring equipment, supplies, and land, contracting the construction of infrastructure, purchasing goods and services, and allocating concessions; (7) contract national and international consultants; (8) contract scientific applied research needed to improve natural management; and (9) promote scientific and nature tourism.

The GOCR's governing legislation for foundations has directly impacted FUNDECOR's operations. First, since USAID funds were provided to the GOCR for its creation, FUNDECOR was formalized not as an NGO but as a product of the GOCR. According to Foundation Ley #5338 of August 28, 1973, the "administration and the orientation of foundations will be the responsibility of the Administrative Junta." Their powers include: (1) appointment of the FUNDECOR executive director, (2) approval of annual work plans and budgets, (3) regular evaluation of work progress, and (5) program coordination promotion. The five-person body, which is appointed in block for a three-year period, includes one appointed by the executive branch, three appointed by the GOCR from

the Ministry of Planning, and one from the municipality where the foundation was established. These persons have come from both the private and public sector.

OBSERVATION

FUNDECOR's mandate is sufficiently broad and this has allowed for program changes based on changing needs and priorities.

The real potential concern rests with the temptation this government appointed body, with considerable powers and influence, might have over FUNDECOR's future resources and program. There is ample opportunity for budget resources to revert to what the present Junta President terms a "petty cash fund for the area." (Although the team concurs that this possibility is indeed feasible, we note that we did not hear of such activities.)

B. FUNDECOR's Mission Statement

As presented in their logframe and other documents, "FUNDECOR's mission is the conservation, development, and use of the natural and cultural patrimony of the ACCVC."

During the interview sessions with FUNDECOR staff, an explanation close to this same mission statement was heard at all levels. There might be a particular emphasis here or there, but all were able to combine this new conservation/development thrust. Many also embraced an almost personal sense of commitment to this "special mission" they were facilitating. All embraced certain qualitative dimensions, including self sufficiency, cost effectiveness, biodiversity, soil, water, and forest conservation and other relations within the broad context of the FORESTA mission statement. Within this context though, the staff rarely commented about the "cultural patrimony" of the foundation's mission statement.

In our conversations with all FUNDECOR staff about current issues and priorities, all would sooner or later comment on most of the same objectives/priority activities listed in the 1994 plan. Of these, the FUNDECOR objective related to promoting environmental legislation was never mentioned.

Any confusion or possible disagreement about FORESTA's mission in actual practice relates to differences on the best tactical approaches. For example, while most thought that the 60-day focus exercise was necessary and was making substantive contributions, some also felt that if the same trends continued and were carried too far, FUNDECOR would restrict itself from addressing its broader mission.

OBSERVATION

FUNDECOR's mission embraces the FORESTA objective and goes beyond. Given the heavy array of challenges focused on the ACCVC, this is an appropriate mission. The staffers understand and enthusiastically embrace this mission. However, some field staff were concerned that the present scope was going to restrict their future activities.

C. Organizational Structure and Staffing

FUNDECOR was created to be a responsive coordinator, facilitator, and provider of a series of major new undertakings in the ACCVC. By design, the organization was intended to be small and responsive. A fairly "flat" and straightforward structure has developed that has facilitated field operations with San Jose-level coordination, principally with the MIRENEM agencies, USAID, and a growing number of similar institutions. Figure VI-1, at the end of this section, displays the organization and the staffing distribution. A brief description of some of the activities/responsibilities at the various operational levels follows.

C1. Administrative Junta

Since the Administrative Junta basically comes and goes together due to the implementing instructions contained in the GOOCR's foundation law (although some have been reelected), we were able to meet with most from both past and present Juntas. The Junta members interviewed demonstrated great dedication in their charge and great diversity in professional backgrounds. The work of both Juntas has been considerable, particularly the first, as it had to get intensively involved to help comply with conditions precedent and to get things started with MIRENEM institutions. Both have tended to reflect the professional backgrounds of the president. Each president demonstrated high commitment and their personalities set the operational style of their board. Both Juntas have been involved in all phases of operation, ranging from responding to correspondence for assistance to major strategic reviews to the almost permanent effort to obtain approval of various approaches for establishing the endowment fund. The Actas Book of minutes shows that the Juntas have met on an average of once every six weeks since the first meeting was convened in August 1989. This is only one indicator of the time spent, since both presidents have to sign checks and contracts on a regular basis and both are involved in regular and lengthy telephone calls and sessions with the executive director.

OBSERVATIONS

The team observed the numerous contributions both Juntas have provided. One concern, given the relative rapid turnover of the Juntas, almost as a unit, is program continuity. Given their broad mandate, there will be great proclivity to make major program shifts every three years. While we have seen the benefits some changes have brought, given the long-term technical underpinnings that must guide the FORESTA "process," major changes at such short intervals will likely jeopardize FUNDECOR's achieving the FORESTA objectives. For that reason, as suggested in Section VII, we propose that a high-level technical steering committee be installed.

C2. Moravia

Headquarter operations emanate from the San Jose suburb of Moravia. As observed in Figure VI-1, a very small staff of 19 (including all professional and support staff) are providing major support to the Puerto Viejo field office (staffed by 6, mostly foresters) and the ACCVC office and also carrying out several program support activities with numerous key San Jose based institutions. Clearly defined position descriptions are developed for each staff member, including functions, requirements, and other skills and demands. Much of the

work done here evolves around program planning, management, and coordination activities since a large number of the actual activities under FUNDECOR are provided via individuals or firms under task-specific contracts. The management of these contracts becomes an important part of some of the forest engineer here and in Puerto Viejo. All seem to be aggressively pursuing their current tasks. A high degree of collegiality seems to prevail, and many task forces were observed doing specific tasks in response to the latest issues. One group is working to assess the estimated future revenue generated by the forest management programs to ascertain if program costs could be covered under the banner of "FORESTA II," while another group is working to reduce overhead costs. A highly energized exchange between Moravia and Puerto Viejo in support of field operations was observed. There was still great respect for position and expertise as defined in the organizational chart. The executive director is constantly consulting with the other directors and other staff in a way that appears to generate teamwork.

C3. Puerto Viejo

FUNDECOR's original base was located at what is now their field office—the home base for the operations unit. The office is staffed by six experts in their particular areas of program concentration: reforestation, promotion, and forest management—each one assigned to the forest management area level programs. All are foresters, and all are knowledgeable of their activities. Due to the management support systems now in place, the constant use of radio, fax, and phone and common linked computers, office support needs from Moravia did not appear wanting. Rather, program performance is at its highest level with only minimal additional staff. The work roles of the personnel are clearly defined, and when problems are identified, actions seemed to be taken at this level or via quick channels from Moravia.

OBSERVATIONS

The organizational structure seems appropriate for this phase of program operations. Present staff resources appear fully engaged. There is one major vacancy, the director of planning, a key position. For the reasons stated later, the team suggests that additional activities be undertaken, and this will have some implications on future staffing levels. One significant observation, from the team's perspective, is the absence of a social scientist on the FUNDECOR staff.

D. Procurement, Administrative, and Personnel Systems

One of the earliest FUNDECOR expenses, even before the technical assistance contract was signed, was the short-term technical assistance from the Price Waterhouse to prepare standardized management manuals for basic operational services. This was a conditions precedent requirement under the project. Given FUNDECOR's newness and its unfamiliarity with USAID and GOCR operational systems, these manuals proved to be extremely useful in getting the organization off to a good start, over time.

These manuals became an important part of the FUNDECOR management system and provide detailed guidance and quality control to all staff. The manuals also provide a basis for follow-up supervision by staff from the Department of Administration and Finances, FUNDECOR's main staff unit. The four manuals are updated as needed, and changes are

sent to USAID for approval. During the annual external audits, these are used as reference handbooks to assess FUNDECOR's compliance.

The value of such systems to FUNDECOR is the time saved for procuring quality services in a quick and transparent fashion. When needed, standard open competition practices or even IQC-type contractual systems are employed. For example, there is no wait if the amount is under established levels if personnel services in special technical areas where pre qualifying lists have been developed. The General Services chief follows up as needed when delays are observed. For engineering construction projects, FUNDECOR's contract inspection engineer is consulted.

OBSERVATION

In the Personnel Administration Manual, provision is made for a staff training program. At the beginning of each year, each unit chief makes the appropriate recommendations and final decisions go to the Junta for review.

Early on in FORESTA's development, a detailed staff development plan was prepared by Price Waterhouse. The team observed that this plan had not been used as intended. Although 9 of the current 25 staff received some training between July 1991 and April 1994, from the team's perspective, the training activity was not being fully implemented. One major explanation is that the small but high quality staff has much to do.

FUNDECOR's agenda may become increasingly technically and managerially demanding. Targeted short-term training programs covering anticipated high priority areas where little skill base exists should receive more support. One obvious example is in social promotion and community organization work. Due to the important role this skill has played in similar projects throughout the world and due to the heavy presence of technical degree holders in FUNDECOR, this would be an ideal investment activity.

E. Financial Management

The team was directed to give special attention to this topic and to the following point, "Financial Situation." See Annex F for a detailed report prepared by the team's economist, "Factores de Programación y Empeño en el Campo de la Planificación, Programación, y Administración Financiera del Proyecto FORESTA." This report serves as the basis for the information contained in these two sections. It was based on intensive interaction with FUNDECOR financial management staff and director, USAID financial staff, and a review of audit report and financial records.

E1. Financial Controls

Because FUNDECOR was a new organization when FORESTA was created, USAID and Price Waterhouse reviewed it before releasing USAID funds and giving it NGO status. The work by Price Waterhouse under this contract (no relationship with the project-funded technical assistance contract) served as one way to develop the financial manual that many agree was one of the best activities to occur, from an institutional development perspective.

All of the early financial control procedures developed were based on a close following of the USAID system. During this early period, FUNDECOR was also in close contact with the regional inspector general and through this oversight, additional useful knowledge was gathered about the USAID financial control system. Much has since been learned by FUNDECOR.

Pursuant to our review of the external audits done in 1991-1993, each year the number of observations on financial control systems has decreased. Since 1992, the external auditors concluded that the observations have been "minor." Where recommendations were made, corrective actions to the observations were quickly taken. The USAID financial analyst assigned to the project is quite pleased with FUNDECOR's performance. They are regarded as having a well developed control system and the team's expert was able to confirm that impression.

E2. Financial Programming

FUNDECOR has set a goal of approaching financial self sufficiency status by 1995. Although it is not likely that this important event will occur by 1995, the objective has resulted in controlling operational costs and pursuing profit making enterprises. These are laudable approaches. A series of planning and control measures have been introduced to help facilitate this objective, including a permanent effort to systematically review financial planning and the various operational plans prepared annually and quarterly. Financial planning is intimately linked with strategic plans.

Employing this approach, FUNDECOR is constantly in a position to control costs in the "best" way. From the systematic review process and the constant information flow, they are in a position to make good business driven, operational decisions. Employing this approach, sample standards to measure unit efficiency are often developed. The team observed how these have had positive effects on many field and Moravia-based operations. One earlier cited example was the 40 percent decrease in operational costs to produce a forest management plan and contract over a three year period.

The systematic approaches employed surpass USAID's norms, as reported by the mission's financial analyst. This has had a positive impact on the organization's overall fiscal situation and helps create a more focused, business like operation.

E3. Financial Administration

FUNDECOR employs a very rigid control system. During the period of the annual work plan exercise, each unit is required to prepare the budget for their particular activity. Included in each unit's plan are the required purchases for goods and services. These are reported to the General Services Department, where the request is evaluated. The estimated price determines which category of procurement system is employed. With purchases over C500,000 to C1 million, for example, a very rigorous competitive bidding procedure is followed, including an ad hoc review committee to rank proposals and make recommendations. Similar rigid controls on payments, receipts, and collections are employed. Here again, the system surpasses what USAID usually expects from such institutions.

F. Financial Situation

F1. Present Status and Projections

For budgetary and program management purposes, USAID has divided the \$7.5 million budget listed in the Project Paper into two categories. Of this total, \$2.5 million is administered by USAID to cover the USAID advisor, Price Waterhouse, audit and evaluation, and inflation cost. Of this amount, almost \$1 million remains (as of 12 July 1994). \$5.0 million goes directly for the FORESTA project to cover program components. As is shown in Annex F, page 10, the current balance is \$2.1 million. Some of the FORESTA components are over or close to their budgeted amount with almost two years to go. The Global Operations budgeted is, however, most notable. FUNDECOR budgets their core operational budget from this line item, which has a remaining balance of almost \$1.2 million.

For planning purposes, taking into consideration the remaining balance and factoring over a two-year period estimated overhead costs, a \$450,000 annual operational budget target planning level was established. Employing this figure and factoring the "forecasted" budget for the other components based on past trends (admittedly difficult given the newness of the foundation), very conservatively, there would be an estimated unspent balance of \$400,000 at the PACD. This anticipated balance, plus the \$1 million balance currently unprogrammed for the technical assistance contract fund managed by USAID, generates a sizeable cushion from which significant investments could now be made.

F2. Financial Sustainability After FORESTA

At the request of the USAID, the team's financial analyst calculated the likelihood of sufficient resources in 1996 from the endowment to cover core budget needs. The return provided by the endowment fund's interest rate and that which comes from reflow generation are factored. However, since FUNDECOR is also anticipating that it will generate revenues from recent revenue creating activities, that element exists as a possible supplemental resource. For example, from the Certificado de Bonos Forestales (CAF) FUNDECOR receives a portion from the DGF based on the management services owed for each approved forest plan. However, given the newness of this system (DGF was just now making these transfers for the first time to FUNDECOR), this real revenue source was not factored in these calculations.

Therefore, by just factoring in the endowment funds generated, will there be sufficient revenue during the last two years to generate the annual core administrative budget of \$450,000. By early 1986, the amount estimated in the endowment will be \$10 million. These funds are at COFISA Bank and will reach a value of C1501.5 million on January 1995, with an annual return rate of 25 percent. To determine if the income flow provided by the endowment fund's return is enough to satisfy FUNDECOR's core administrative budget, an annual based projection method was used. The following assumptions were made in making the projection calculations.

- The average between the expected inflation rate and the planned inflation rate for Costa Rica is 15 percent.

- According to the most recent estimate from the Federal Reserve of Atlanta, Georgia, the estimated U.S. annual inflation rate will be 3.5 percent, with a trajectory at that same level towards the end of the century.
- The long-term annual devaluation for the colon is 12 percent.
- The national base rate is close to 23.5 percent annually.
- Under conditions such as those of FUNDECOR, the actual return is between three to four percentage points above the passive base rate—close to 26.5 percent and 27.5 percent.

These elements take us to at least two different scenarios to obtain a real interest rate range between 8.5 percent and 9.5 percent. If the endowment fund had a level of \$10.0 million from 1995 at the beginning of 1996, then it would produce a gross return of at least \$850,000 annually, maintaining the constant dollar value of 1995, to which a 1 percent administrative expense cost should be deducted.

If the cost of financing the core administrative budget adds up to \$450,000 and the depreciation expense of the assets adds up to \$30,000, we can conclude that the return provided by the endowment fund is enough to cover not only the operation expenses and maintain the acquisitive power of the fund but also cover the reforestation deficit component. Again, this calculation does not factor in FUNDECOR's other revenue sources.

G. Strategic Programming and Planning

The FUNDECOR mandate requires careful coordination and planning of resources. Soon, the ACCVC global strategy will be released, and this will provide considerable opportunity for more specific area wide planning, monitoring, and evaluation activities. This will be a major management tool for the ACCVC for which FUNDECOR can take major credit and future responsibility.

Time and limited staff resources have not made it possible for FUNDECOR to formulate a specific strategy plan for future activities within the broader (soon to be released) ACCVC program.

Strategic planning approaches were aggressively pursued to help assure that appropriate budget and staff resources in support of the new objectives are being provided. As a product of that exercise, new project outputs are regularly tracked by the Department of Planning. The systems also track these as they relate to specific strategies and objectives.

However, additional approaches, rarely seen in developing country programs, are also being introduced to facilitate strategic planning and activity prioritization. To help assure that objective means for prioritizing program initiatives are available in the most cost effective approaches, FUNDECOR uses GIS technologies for its strategic planning operations. Within FUNDECOR's Department of Planning, a unit employing this highly sophisticated equipment provides regular information for strategic planning and program operations. Management uses this system to chart changing deforestation and land use trends

and to identify critical priority areas from which more cost effective approaches can be introduced.

OBSERVATION

The half-time director of the Department of Planning will be departing soon to study for his Ph.D. It is the team's opinion that this position should be filled quickly by a person of the highest professional levels. It is very important that FUNDECOR develop its own strategic plan to perspective national and international institutions. Also, strategic planning and evaluation activities need to be intensified and assistance needs to be directed toward the development or the coordination of new proposals covering a variety of project development activities.

H. Monitoring and Evaluating

FUNDECOR planners have developed a very straightforward means to assess "progress" via the quarterly monitoring of progress reported in the annual work plans. Senior management is involved in this review and extensive reports are made. This mechanism would be sufficient to meet the needs of most projects. However, there are a variety of less mechanistic concerns that must be addressed if real progress towards achieving project goals are going to be realized.

No systems are in place yet to monitor ecological changes within the ACCVC, except for one small effort being coordinated with CATIE scientists and the GIS deforestation monitoring system. Such a requirement was provided in the Cooperative Agreement. FUNDECOR's "beacon" evolves biodiversity but there is no systematic mechanism to evaluate and monitor changes. The extensive field work now being done by FUNDECOR, which by nature introduces change under the various management systems employed, requires some basic systems for monitoring change over time, at least in the areas of major field operations.

Highly regarded Costa Rican institutions such as INBio are ideally suited to provide guidance. Within USAID/W's Global Bureau, the Environment Center the Biodiversity Support Program has a mandate to assist missions with such tasks. More information on this is provided in Section VII. In addition, socioeconomic factors related to the FORESTA approach need to be studied to assess impact, particularly in economic terms. The team is also aware that there are costs associated with these recommendations. However, to be counted in the international league FUNDECOR is destined to arrive, efforts must be made (probably in collaboration with other institutions), to systematically develop approaches, set priority activities, and to develop proposals that others might fund.

OBSERVATION

Monitoring programs to assess the impact of FUNDECOR activities on bio-diversity, ecological, and socioeconomic variables within the ACCVC, or at least at critical points, should be designed and hopefully implemented within the next few months. If FUNDECOR and USAID did not have sufficient resources, if designed collaboration with other organizations (as well they should), they could assist in identifying sources of additional

funding. This is a high priority topic within the broader scientific and donor community, at the highest levels.

I. Overall Institutional Assessment

Four years ago FUNDECOR was created as a special institution to do what others had failed to do, at least in Costa Rica. Very quickly, especially when the operational and technical challenges FORESTA encompasses are considered, a series of client-friendly programs and support systems were developed and introduced. Technical and support manuals were built around these new service delivery systems to include forest management and reforestation and other programmatic themes. A comprehensive series of management and administrative systems are now in place. Their financial management process, the foundation of any organization, is functioning extremely well. Few operational glitches are observed and the monitoring systems employed usually help detect issues before they become problems. For the first time in the critical geographic area covered by the project, a series of essential resource management services are being provided in a cost effective and bountiful fashion.

Based on the high quality of people FUNDECOR has recruited and the confidence these people have in the FUNDECOR "system," including the technical and administrative manuals and the operational systems developed for monitoring project progress, a special spirit has been created. There is a high degree of professionalism observed across the small organization as people talk about their tasks with considerable interest and interact with clients. Their knowledge of many of the technical issues is also noted.

Resources are being orchestrated wisely and prudently. There is some flexibility, but a "business" focus permeates throughout FUNDECOR's operations. Careful attention is given to make cost effective decisions. Resource allocations are directed in such a way that appropriate returns are sought. Decisions are based on a thorough review of the subject from a variety of impressive data sources. Careful attention is made to cost effective decisions. Risk factors are held to prudent levels, as there is opportunity for some experiment. Under this managed process, thoughtful change is encouraged.

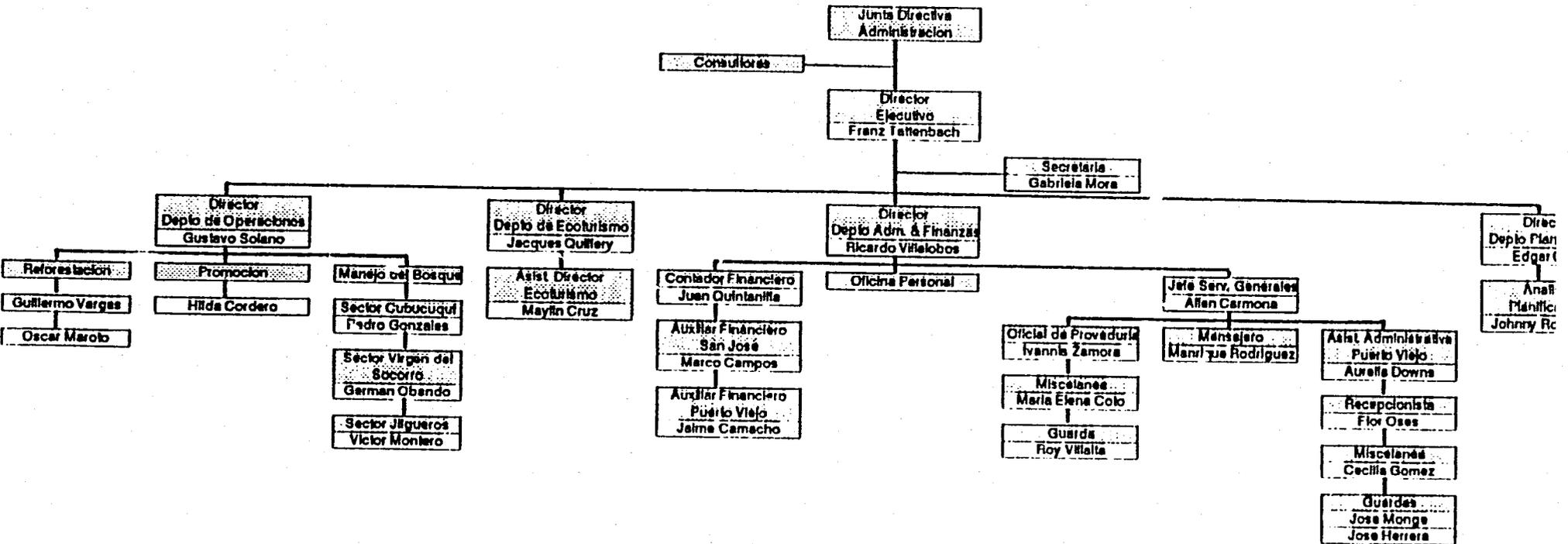
From this overview statement, many of the basic qualities that any dynamic institution must possess for accomplishing its mission are now in place or in the process of soon being incorporated. At the same time, due perhaps to time constraints or conscious decisions to the contrary, there are problems that if not soon corrected will constrain and even detract from the institution's ability to implement its mission statement. These lie principally in the area of program focus over the next two years before the PACD. As discussed in greater detail in Section VII, future institutional sustainability and the achievement of FORESTA's objectives will require quick attention in the critical areas of marketing/fund raising, community participation/environment education, and research coordination. In addition, more work is needed in other critical activities as defined in the new outputs suggested to guide the project in the remaining period.

Apart from being basic elements for responding to the FORESTA purpose, these are also major areas which future new sponsors will want to see in place to ensure that they would soon be embraced by FUNDECOR. As all know too well, little time remains. The

next section provides more specific guidance to best position FUNDECOR for its future after FORESTA.

FIGURE VI-1

FUNDACION PARA EL DESARROLLO DE LA CORDILLERA VOLCANICA CENTRAL
ORGANIGRAMA



SECTION VII OVERALL PROGRAM ASSESSMENT

This section begins with a background discussion of the major programmatic adjustments that have affected FORESTA. The discussion serves as the transition point for the suggested high priority activities and outputs proposed for the next two years. These were developed to help prepare FUNDECOR for its new status beyond the PACD. The section closes with an assessment of the Price Waterhouse technical assistance contract.

A. A Background of Change and Uncertainty

Since project approval, key financial and other underlying assumptions from which the FORESTA Project Paper evolved have dramatically changed. Almost none of the GOCR counterpart funds originally planned to cover specific operations was received. There were many delays in project start-up. Two years lapsed as the necessary legislative approval for FORESTA was obtained. Due to the newness of the foundation and the learning curve time required to obtain the necessary skills in USAID and GOCR bureaucratic processes, additional time was required. The Cooperative Agreement provides for budget levels and activities different from what was proposed in the Project Paper. To the credit of project leaders in USAID and FUNDECOR, such delays and adjustments have not stifled program flexibility.

B. FUNDECOR Reprogramming Exercise

The GOCR legislation for foundations requires the total change of Junta membership every three years. In July 1992, upon entering their new assignments, FUNDECOR's second Administrative Junta decided to undertake an exercise to "redefine" the project. This was a major turning point.

Two important operational hypotheses emerged from this highly focused exercise: (1) land users will accept new resource management practices if these new systems are perceived to be remunerative, (2) if the profitability of park resources are improved, the parks will become self sustainable and the ensuing economic and social benefits impacting the broader region will generate improved land use practices. If value added activities could be brought to the forest resources through a series of innovative market driven operational systems, sustainable development would occur.

The strategic priorities employed by FUNDECOR to guide these operational precepts focused on achieving sustainability by arresting deforestation in the natural forests and by improving the facilities and management of the national parks. This exercise narrowed the program scope while also introducing new business orientated operating procedures. This major modification was done to consolidate the progress and to ensure that significant measurable impacts would be produced by the PACD.

To help institutionalize this exercise, a new logical framework was presented to USAID. The mission subsequently approved FUNDECOR's 1993 and 1994 annual work plans, which employed budget tracking systems for monitoring the operations in the new logframe.

The evaluation team concluded that while the process deviated somewhat from the original broader conservation and development precepts as embodied in FORESTA's project purpose statement, truly significant accomplishments were observed. Major recognition has been extended the program for the accomplishments observed. While this exercise alone can not take the credit for FUNDECOR's achievements, it did provide the basis for the program to have a significantly greater impact.

Now is the time to start preparing for the future. The original purposes of the FORESTA document are still valid and fully embrace the FUNDECOR mission statement, "the conservation, development, and use of the natural and cultural patrimony of the ACCVC." The suggestions geared toward this same objective will be of considerable interest to potential contributors.

C. Overview of Outputs Toward Achieving Overall Project Purpose

Section III contains the team's comprehensive assessment of each of the 42 outputs for FORESTA's four main components under the USAID and FUNDECOR logframes. Significant progress has been made on some of these outputs and many will be achieved by the completion date. Many more require considerable work and a few should be deleted. Of the total list of planned outputs, 15 will not likely occur by the PACD. For the 20 outputs listed under the Project Paper, 12 outputs will likely have been completed. For FUNDECOR's outputs, 13 will have been completed. The component noting the greatest shortfall was "Introduction of Trees on Farms" and the most important activities that did not occur were community participation and environmental education and environmental monitoring and agroforestry.

The team observes that this tally explains only a part of what has happened. Some broader qualitative impressions and professional opinions need to be provided. Given the major challenges encountered by FUNDECOR leadership as they launched this new approach to control deforestation rates, the team was impressed with the extremely quick fashion in which a highly professional organization was created and operating in the zone. Based on the effective relationships developed over a short period with the SPN and the DGF, a collaborative, almost united front has for the first time been observed in Costa Rica. An impressive number of large and small landowners have committed 10,000 ha of land under the innovative forest management program. New, native specie nursery operations are supporting a new approach for reforestation.

The team further observed the very positive image directed towards FUNDECOR throughout many parts of the region based on a series of well administered services important to an increasing number of landowners and residents. The new Costa Rican administration is placing natural resource management as a very high priority and is now meeting with FUNDECOR management to learn more of its system, as a possible model to help execute this policy. An extremely well managed FUNDECOR program, staffed by a

highly committed staff and technical advisory team directed by exceptional leadership, have created an image of a highly productive team. Although there is much more that must be done, the groundwork has been prepared for even more rapid progress during the remaining two years.

These are significant accomplishments that cannot be taken lightly, particularly given the complex challenges of the FUNDECOR mandate and the lengthy series of outputs and project success indicators expected at the EOP. However, without detracting from these notable accomplishments, much remains to be done before FORESTA's purposes are achieved. When the lessons learned section is compared with the midterm findings, much more which needs to be done. Given the information now known about the evolution of similar projects undertaken over the last decade, we now know that insufficient time and resources were allocated.

This is literally "phase one" of a longer term activity. For that reason, USAID project designers wisely chose to create a permanent funding capacity to address FORESTA's purpose statement long after USAID funding terminated. Based on the impressive achievements recorded and the anticipated continued momentum, the evaluation team firmly believes that if FUNDECOR commits itself to the priority activities listed below and adheres to the bulk of the suggested targets discussed (most of which are restatements of ongoing outputs) over the next two years, it is quite likely that most of FORESTA's challenging EOPS will be realized before 2000. Building from the present portfolio and the incorporation of the approaches suggested, a series of plans, field experiences, and new supporters will be in place generating new resources for confronting Costa Rica's forest and natural resource management crisis.

The targeted activities and revised outputs described below are based on our firm belief that there will be continuing international donor interest for the conservation/development agenda in Costa Rica, which is so effectively embraced by FORESTA. To more confidently be courted by donors, research, institutional environmental PVO's, businesses, etc., greater capacity building in targeted key within the broader FORESTA mandate is needed. Based on the team's extensive review of FORESTA's budget situation and future projections (as presented in Section VI.F.), sufficient resources for supporting many of the activities described should be available.

The evaluation team notes that this will probably be the only period in FUNDECOR's evolution when "soft money" of this magnitude is available from which targeted investments can create the strongest institutional base. However, unless major progress is made in the areas highlighted, a significant opportunity to truly establish the permanent structure for achieving FUNDECOR's mission statement will have been lost. If such activities are not undertaken, FUNDECOR will not attract the interest to make effective use of the endowment revenues targeted to support operational expenses.

D. Highest Priority Immediate Activities

To embark on this new and previously unanticipated phase of FUNDECOR's evolution, five priority areas are proposed. Some work has already been done on all, but given the importance for creating the new experiences required, work will have to be greatly

accelerated and focused. For the reasons stated below, the team places the highest priority on the transfer of the endowment. However, since the other activities listed are also so basic for achieving FORESTA's overall objectives, the team feels that these should be addressed before the release of the endowment. Descriptions are provided to include indicators to assess progress for each.

D1. Transfer Endowment

During the last one and one half years, leadership and staff from the key institutions have focused on establishing the fund. The team believes that the inability to come to an acceptable agreement has distracted attention from addressing other activities, which must occur between now and the PACD. This needs to be quickly established. The team recognizes the sensitivities and inherent difficulties associated with this recommendation and has offered suggestions for consideration. We strongly urge all parties to quickly arrange a mechanism so that within the next six months, the new system can be in place.

Reasons why this matter should be expeditiously addressed are listed. To assure prospective new donors and business clients the existence of FUNDECOR's assets, it is vital that this permanent core budget mechanism be in place. The fund is needed to maintain the commitment and momentum with the long-term contracts FUNDECOR has already established with numerous clients. It is urgently needed to address the growing concerns among FUNDECOR's excellent staff, who feel that there are only two years left. Further, to have a minimum trial period for evaluating the new system before USAID departs, the system should be established soon.

Indicators of progress in this area should include some of the following:

- Section VIII provides USAID with a listing of verifiables that it should consider before transferring the endowment.

D2. Marketing and Fund Raising Campaign to Generate Program Support

Very much linked to the above is an aggressive market campaign for generating a basis for future program activities in the ACCVC. Donor funding cycles are quite complicated, sometimes taking two years and more in gestation. FUNDECOR has undertaken a variety of approaches to meet with possible sponsors. However, a more targeted and exerted effort to link with donors, business leaders, and foundations is now urgently needed.

To facilitate this undertaking, a program strategy document statement that spells out FUNDECOR's unique approach for conservation and development work in the ACCVC is needed not only given its charter but as a marketing tool. Over the next three to four month period, a strategy (brief proposals/concept papers describing FUNDECOR'S needs and selected development and investment opportunities) is needed. Some of the suggested proposal topics are listed below. These represent areas that embrace FORESTA's objectives and will also interest possible future sponsors. FUNDECOR urgently needs to be on the offensive with "its" program promotion initiative.

A designated person to work through various Costa Rican and Washington-based institutions on an almost full time basis is required. Quick work is needed to develop contacts, explore possibilities with research foundations, and establish a more permanent research exchange program. Many Costa Rican institutions such as CATIE, UNCR, UNA, and INBio are highly regarded with established links to the donor community, and should be contacted.

Indicators of progress in this area should include some of the following:

- Hire appropriately qualified person or assign appropriate individual to lead this effort. For example, the executive director is ideally suited for this responsibility, but FUNDECOR would probably have to be hired to assure continued momentum on the day-to-day activities in his absence.
- For the next annual work plan define strategy, plan and allocate appropriate resources.

D3. Research and Training

From the global lessons learned from similar conservation and development projects, where so much is contingent on the most appropriate knowledge base, two of the keys to long-term success relate to resources devoted to technology development and adoption and to the continued development of the skills of its employees. Although a series of related experiences and institutional linkages have gradually evolved in these areas, FUNDECOR has not taken a strategic approach to the development of research and training programs.

For FUNDECOR to develop into an institution that merits the support of other donors, it must immediately develop a collaborative research program that begins to address the priority technology gaps in its forestry and park management activities. Also, it must be able to provide the information necessary to demonstrate to itself and others that its activities are indeed having a significant impact on the forests and natural resources (biodiversity, soils, and water) and residents of the ACCVC. Also, it must take steps to develop a training program to ensure that FUNDECOR benefits from the many new approaches and technologies related to this rapidly expanding field.

The team does not suggest that FUNDECOR become a research institution, but rather that it work with its existing partners and others to identify research priorities and the resources necessary to carry out such research. FUNDECOR's conservation and development activities provide an ideal field laboratory for biological and social scientists interested in making practical contributions to the conservation of natural resources. The need to introduce relevant programs in the buffer zone region from a wide range of experiences require that relevant networks and technologies be developed. Through such arrangements, properly supported low cost knowledge bases and networks are developed.

D3a. Research, Inventory, and Monitoring of Impacts

There is a recognition at various levels of the vital importance of research in the sustainable development of the ACCVC and some research projects have begun to be

implemented, e.g., the monitoring by CATIE of plots on one forest under management. FUNDECOR has initiated other dialogues with OTS and INBio and other centers as discussed in Annex D. These are important initial steps but are not placed within an integrated strategic approach to the design and management of an overall research program directly complementary to FORESTA's long-term objectives. Such a program which is based on collaborative links with other institutions that address numerous research issues, is important for the ACCVC and for FUNDECOR's future as an institution.

Probably most importantly, FUNDECOR must ensure that research is quickly put in place to support its ongoing forest management and forest plantation activities. As a recent U.S. Forest Service visitor put it, FUNDECOR is asking its clients/beneficiaries to take a lot of risks in establishing native species plantations. The USAID/CDIE report, "Forestry and the Environment—Costa Rica Case Study" discusses many of the research needs for both native species plantations and forest management. For both of these components one of the most pressing needs are growth and yield studies on various sites. Other research areas include the impact of gap size on natural regeneration, seed storage and germination techniques, pest management, and the economics of silvicultural treatments for plantations and natural forests.

There is need for a conservation of biodiversity monitoring plan. Such a plan could integrate research, inventory, and monitoring activities. Other sections of the report flagged the absence of such a plan. It is a topic of highest concern for it is directly related to FUNDECOR's conservation objectives and therefore without some mechanism in place they cannot project the leadership commensurate with their mandate. Such information is also vital to assist them in their increased number of external dealings with organizations that will demand to assess impact over time. At the same time, the team is aware of the view that such systems can be quite expensive and there are not many global experiences covering large areas. The Biodiversity Support Program with the World Wildlife Fund, which is managed by the Global Bureau's Environment Center, has a component dealing with monitoring and assessing systems to develop appropriate methodologies based on human, financial, and information capacities. This next phase of RENARM, which will focus more directly on biodiversity themes, may be able to assist FUNDECOR (and if needed, appropriate national centers) to rapidly design a plan/proposal.

A more comprehensive research program must also be considered, at least to the extent of entering into agreements with appropriate partners and beginning the process of preparing a research strategy and appropriate proposals for funding. Fundamental to an understanding of the most appropriate tools and methods for achieving sustainability in the region is a research program that addresses the following areas: archeological preservation methodologies, agroforestry systems, logging guidelines, ecological and socioeconomic impacts of different management activities, ecological recovery after disturbance, secondary forest succession as an alternative or a complement to reforestation, the impact of different types of vegetative cover on aquifer recharge, and the human carrying capacity of national parks and other natural areas. Some of these topics are currently being addressed in Costa Rica or in neighboring countries and would be easy to coordinate and share information through periodic workshops and report exchanges.

There must be action-research and action-learning at the local level to empower communities to participate in resource management decisions that have a direct impact on their well-being. The important initial activities only begin to scratch the surface of the social science research that needs to be done within the region. Research should focus on such needs as the direct and indirect social values of conservation, the social costs of environmental degradation, social attitudes, and perceptions toward conservation, attitude change, behavior modification, and social science research methodology and evaluation techniques appropriate to local and regional conditions.

Clearly, the mandate for biophysical and social science research goes well beyond the capabilities of any single institution, which necessitates close cooperation, collaboration, and coordination of research efforts within the ACCVC.

Indicators of progress in this area should include some of the following:

- Hiring a science coordinator to lead the effort to define FUNDECOR's research needs, prepare a research strategy, and develop relationships with appropriate research and education institutions.
- Approval of a research and monitoring strategy and plan for this year's work plan.
- Signing of agreements to collaborate in research design, funding, and fund-raising with two or more research and educational institutions.
- Inclusion of funds in the 1995 budget to work with other institutions to design research programs and collaborate on the funding and/or preparation of proposals for funding.
- At least one joint proposal funded by the collaborators and a donor.

D3b. Training

FUNDECOR has demonstrated imagination and creativity in developing its program. Much of this results from the experiences that FUNDECOR staff had elsewhere before coming to FUNDECOR. If FUNDECOR is to continue to grow and develop, it must systematically open itself to new ideas and similar activities must be done with its principal collaborators. The team observed a series of new institutional relationships that can serve as an excellent base built on relevant shared experiences.

Building from this base, FUNDECOR needs to develop a training program for the entire organization—from the Board of Directors to the small farmer planting native species on his farm, the park guard patrolling the limits of the ACCVC's parks, and the parking concessionaire at Poas.

FUNDECOR's Administrative Junta and executive management, as well as high level MIRENEM and ACCVC officials, could benefit from observation trips to similar activities elsewhere in Latin America. Others could benefit from short courses and seminars in Costa Rica and elsewhere. CATIE, OTS, and others could be asked to design short courses that

respond to FUNDECOR's needs. More park personnel should be sent to the park course in Colorado that some representatives of SPN are attending this summer. One or more persons could attend the biodiversity monitoring course that the Smithsonian Institution sponsors every year. Office personnel could be sent to short courses to upgrade their computer and other office skills. Not only does FUNDECOR and its increasing number of collaborators benefit, but based on the team's interaction with the staff, its highly professional presence would create a positive image for enhancing FUNDECOR marketing.

As in the case of the research plan, FUNDECOR needs to design a training strategy that is based on an analysis of the institution's needs. FUNDECOR's employees and beneficiaries should participate in the preparation of a strategy and plan. The plan should include some training for almost every FUNDECOR employee and beneficiary every year. The goal should be to expand the horizons of everyone associated with the FUNDECOR program to challenge their imaginations to seek new and creative ways to ensure that the natural resources of the ACCVC are managed sustainably for the benefit of all. Cost for such activities have to be considered, but such investments will, the team strongly believes, generate considerable immediate and medium-term returns.

Indicators of progress in this area should include some of the following:

- Revise and approve FUNDECOR's training strategy and plan during the course of this year's work plan.
- Include funds in the 1995 budget to provide challenging training experiences for a significant number of FUNDECOR's employees and selected collaborators who have not participated in a training activity during the previous 12 months, including at least one observational tour for FUNDECOR board members, senior staff, and senior ACCVC personnel.
- Prepare a proposal, perhaps in collaboration with other NGOs and/or educational institutions, for funding to support training for MIRENEM personnel and participants in FUNDECOR sponsored activities.

D4. Community Participation/Environmental Education

FUNDECOR is supporting a number of local groups and organizations in effective ways through individual project funding, training, and some networking activities (as discussed in detail in Section IV). From such efforts, significant good will and good works have been created. This is a major achievement for among other things it has generated good relationships. However, based on the team's collective experiences and the reasons stated in Section V regarding global lessons learned, there is increased evidence that the more successful programs employ well developed approaches to better understand, engage, prepare, and involve land users and their neighbors. Not only do such programs run more efficiently and cost less, they create a more sustainable structure. What the team observed was a start, but it is not driven by a comprehensive plan of action that addresses the participation of communities, particularly women, in their own development activities, but represents more of an *ad hoc* response to selected local needs and opportunities.

The recent World Bank publication "Putting People First," by Michael Cernea documents numerous approaches gleaned from such approaches. Similarly, the DESFIL project emphasizes the development of land use strategies on the direct involvement and understanding of user resource base and incentives. A recent bulletin highlighting one participatory approach in natural resource management is included in Annex G.

One objective of such a program is to create at the community level an understanding and a keen awareness of the importance of sound natural resource management for human well-being and an appreciation of, and respect for, the natural beauty and ecological/biological diversity within the ACCVC. Understanding leads to a sense of solidarity with nature, and is therefore critical for achieving long-term sustainable development that truly enhances the quality of the human experience. One effective teacher, for example, can produce more effective husbandry of natural resources than a cadre of park guards and vehicular patrols (which are much more expensive).

FUNDECOR has allocated funds to various environmental education projects, e.g., the preparation of field guides to the birds and mammals of the ACCVC and nature interpretation materials for some of the parks. This kind of activity should continue, but more important is the design and implementation of an action-oriented, environmental education program consisting of formal and non-formal educational experiences to accomplish stated goals. Such an activity could be done in collaboration with the Ministry of Education.

It is the team's view that a broader range of behavioral patterns have to change. Increasingly, participatory targeted educational programs are being touted as one cost effective means to facilitate more rapidly such changes. One new Global Bureau program that may be consulted for assistance in these areas is the GreenCOM project.

The linkage between environmental education and community participation is representative of the kind of investment in social capital essential for the development of local communities and their participation in directing their own destinies. That local community involvement is a cornerstone of sustainability is one of the critical lessons to be gained from past natural resource conservation efforts. Future contributors to the FUNDECOR program are also going to be looking for interest and commitments in this topic.

Indicators to show progress in this area should include the following:

- The hiring of a broad gauges sociologist/social marketing person to work with staff and "clients" in the development of an appropriate strategy and plan.
- Develop specific actions for this year's work plan that contribute to this effort.
- Develop training programs on community participation strategies and education programs.
- Develop a proposal, probably in collaboration with an appropriate NGO educational center.

D5. Staffing Implications

Based on the team's assessment of present needs and institutional demands/capacities, FUNDECOR needs to provide additional staff to plan for, and initiate, action in the high priority activities discussed above. The addition of staff will indicate a commitment on the part of FUNDECOR to take these high priority areas seriously. There may be, in some instances, some eminently qualified in-house capacity to address the tasks identified. It is not the purpose of the team to make judgements in that regard. There are, of course, budgetary implications to any such action but funds did appear to be available and some of the activities will in effect generate future revenues, given the interest that foundations and donors have in the same topics. The team is fearful of foregone opportunities without such investments.

New staff requirements include the following three positions:

(1) **Fund-raising/marketing expert.** The principal responsibilities of this person would be to coordinate the preparation of project proposals to be submitted individually by FUNDECOR or, preferably, as joint ventures with other institutions. The project proposals would include research and training, environmental education, community participation, and ecotourism.

This person would also network within the international donor and lending circles, and would create an imaginative program to market FUNDECOR in the public and private sectors, both nationally and internationally.

This is a critical position in view of the fact that the long-term institutional sustainability of FUNDECOR is dependent upon securing outside sources of funding.

(2) **An expert to define research and monitoring priorities and integrate and coordinate the scattered research activities of FUNDECOR (including proposal preparation in collaboration with appropriate research and educational institutions) into a unified and comprehensive program of research that is focused on a specific set of well-defined research areas supportive of FUNDECOR's major activities.** This would provide not only a stronger base for more scientifically sound land use management, but also a greater degree of leverage with major donor and lender institutions. FUNDECOR will have a strong competitive advantage in the fund-raising arena if it has an initial track record in sponsoring critical research and a strong research and monitoring plan in place to begin to address emerging issues.

(3) **A specialist in community participation and environmental education.** Two of the critical lessons from past development activities are that local communities must participate actively in defining their own development paths. In addition, environmental education at all levels, formal and informal, is critical for an understanding of local resource management issues and is an effective avenue for the empowerment of local people, particularly women. This individual should be a social scientist and should work closely with the group of foresters in Puerto Viejo.

FUNDECOR, again, has made some impressive achievements in promoting community participation, e.g., by ensuring that a local labor force is utilized whenever

possible in project activities and by formulating plans for concessions for local people for national park services. Nevertheless, these activities are scattered and are not integrated into a comprehensive plan to address the major issues facing local communities vis-s-vis natural forest management, national park protection, and other FUNDECOR natural resource conservation activities in the ACCVC. Similarly, there is no integrated plan that holistically addresses the need for environmental education at the community level in the ACCVC. It is all well and good to publish field guides to the fauna of the region, but this does not constitute an environmental education program that will produce direct benefits to local people, rather it is an important part of a well thought out strategic environmental education program.

FUNDECOR needs a specialist to define priorities and design a program that addresses the fundamental needs and dimensions of community participation and environmental education to benefit local people and contribute to their sustainable development.

E. Suggested Midterm Outputs for Addressing FORESTA Purpose

As requested, the evaluation team developed a series of outputs using Section III assessments and the factors contained in the scope of work for the delivery order. In undertaking this task, the team determined that the database relevant to most of the factors in the scope of work were not sufficiently developed. Instead, the team employed factors such as: (1) relevance to achieving FORESTA objectives, (2) the current USAID and GOCR budget and projections for FORESTA, (3) the PACD and what could be done over a two-year period, (4) the impact information completed in the recent CDIE/FORESTA evaluations, (5) the global lessons learned from Section V, and (6) our own assessment of the situation.

For program managers to better track what is being proposed as it relates to each component, these are presented within the components used throughout the evaluation. However in those instances where similarities exist among the activities originally listed, we have grouped them into one output. To further assist the assimilate of these various outputs, three categories were established per component: (1) modifications to existing outputs, (2) new outputs felt essential, and (3) reductions or eliminations of output. Though a numerical listing is provided, this was done only to facilitate identification. Further, it should be observed that by far the largest category is the "modifications to existing outputs" category. For most of these we have proposed language to sharpen focus based on the present situations and challenges. Many of these directly complement the above listed priority activities.

F. Global Operations

F1. Modifications to Existing Outputs

Output 1. Before the PACD, a new conservation and development strategy for the ACCVC is developed and approved by the GOCR that serves as the baseline guide over the next five-year period.

Comments. Although the ACCVC strategy report is now being finalized, this activity should continue so that it serves as the guiding beacon beyond this phase of FORESTA's development. Through such a mechanism a basis for maintaining the technical integrity to the process is better assured. This will be an important factor for guiding overall program direction after USAID departs. This should appear as an activity in the 1996 work plan.

Output 2. FUNDECOR's administrative systems and procedures relating to personnel, financial management, purchases and contracts, and general administration are developed and applied correctly.

Comment. Excellent manuals prepared by Price Waterhouse are being used, and have been constantly revised and updated. This inclusion serves to highlight it as one basic measure for quality control that should be mentioned.

Output 3. Create a technical advisory committee formed by people with extensive knowledge of the FORESTA agenda to help to guide and monitor the program.

Comment. Many concerned Costa Ricans commented with the team of their worry that the long-term technical integrity of the FORESTA program must be assured. This is a very long-term proposition that cannot be seriously altered without looking at the major consequences for such actions. To help assure continuity, a technical advisory committee should be formed. This group would meet semi-annually to review program progress, assesses current activities and provide recommendations to the executive director and the Executive Junta. Such a group could, if the opportunity permits, assess quality of new project proposals, recommend improvements and collaborators, and assist with marketing. The function of this committee is discussed in Section VIII. At a different working level, another important means to help assure the technical integrity of the program is the staff training activity mentioned above.

Output 4. Endowment fund established and financing FUNDECOR's recurrent operational budget.

Comment. Highest priority! See Section VII.D1.

Output 5. FUNDECOR executes its program objectives through new projects and grants generated by resources from new sources.

Comment. Highest priority! See Section VII.D2. Program at least one new program in each annual work plan.

Output 6. Prepare a community promotion program to help broaden support and to facilitate environmental awareness initiatives and appropriate behavior in park management.

Comment. See Section VII.D4.

Output 7. Improve forest protection system through a more professional managed and a more career focused program with direct information linkages to the court system and enforcement so that appropriate follow-up can be monitored.

Comment. While the ranger and guard forces have improved their work and reporting of offenses has increased, professional incentives are minimal. Of special concern to the evaluation team was that although the reporting of offenses was increasing significantly, little happens to those ticketed. Increased attention to protection will be an important factor for FORESTA success. There is a need for developing an accredited career track program for the guards and rangers, to develop a program to involve the Justice Department more directly in the enforcement program, and to advise the citizens and residents of this new legal approach. This more punitive approach could link nicely to complement community-level environmental education activities. A special study to assess the effects of current situation and present recommendation to address the problem is urgently needed. A report covering these points and the actions to be taken should be included in this year's work plan.

F2. New and Essential Outputs

Output 8. FUNDECOR develops its own strategy document to facilitate the ACCVC conservation and development strategy.

Comment. During this period of uncertain transition, FUNDECOR needs to strategize its response to ACCVC needs beyond FORESTA and through such an exercise it will help market FUNDECOR. Brief concept paper/proposals of future FUNDECOR perceived responses to this document should be developed and serve as materials for marketing to future potential contributors. Some of these would hopefully support some of the priority activities discussed.

F3. Reduction or Elimination of Output

Output 9. FUNDECOR identifies required changes in the environment that favor biodiversity conservation, the good management of the protected zones, and sustainable use of forest resources throughout the ACCVC.

Comment. While an important activity, this could be a major requirement of an already stretched staff. Perhaps in collaboration with INBio or other, this job could be done.

G. Management of Protected Areas

G1. Modifications and Strengthening of Existing Outputs

Output 1. Consolidation of the various park management plans into a single, comprehensive, integrated document that clearly defines the vision for national parks and protected areas in Costa Rica, their role in national development, and specific objectives and tools for their protection and management.

Comments. There appear to be a myriad of plans that are not consistent or integrated within the framework of a national policy for sustainable development. This is an important task that should be done by the PACD.

Output 2. Much greater emphasis given to field demarkation of protected area boundaries, including those of the recently created Juan Castro Blanco National Park.

Comment. There is a critical need for the general public and resource users within the buffer zone to know the precise location of protected area boundaries within which human activities are strictly controlled. Action in this area needs to be accelerated.

Output 3. A specific research plan on the cultural resources of the ACCVC and their preservation must be prepared and initiated by EOP.

Comments. The preservation of cultural values and resources are also vital elements of sustainable development. This could be included in the research plan mentioned in Section VII.D.

G2. Reduction or Elimination of Outputs

Output 1. The transfer of privately-owned enclaves within the national parks to the GOOCR.

Comments. Although this objective must ultimately be met, this is an endeavor that requires considerable seed money and time to secure private sources of funding for land purchases. Involvement in this activity would diffuse FUNDECOR's efforts at a time when consolidation of efforts is precisely what is needed between July 1994 and EOP.

H. Management of Natural Forests for Production

H1. Modifications Strengthening of Existing Outputs

Output 1. Technical standards for forest management, which serve as a foundation for the preparation, implementation, and control of management plans are prepared, published, and regularly updated based on collaborative monitoring and research programs. Standards are used as the basis for regular training programs for foresters and landowners.

Comments. Existing forest management standards must be improved based on the results of an expanded collaborative research and monitoring program involving FUNDECOR and appropriate research and educational institutions. FUNDECOR may need to work with its collaborators to identify additional sources of funding. Training programs should be developed for foresters and landowners participating in FUNDECOR's forest management activities.

Output 2. Practical guidelines, regulations, and controls for logging under various conditions to encourage regeneration and optimum utilization and to mitigate environmental impact are published and regularly updated and used as the basis for periodic training programs for loggers and foresters.

Comment. Existing forest logging guidelines must be improved based on the results of an expanded collaborative research and monitoring program involving FUNDECOR and appropriate research and educational institutions. FUNDECOR may need to work with its collaborators to develop a proposal and to identify additional sources of funding. Supplemental training programs should be developed for foresters and loggers participating in FUNDECOR's forest management activities.

Output 3. At least 10,000 ha of primary forest under management agreements with FUNDECOR, 5,000 ha with approved forest management plans.

Comment. FUNDECOR has correctly identified the management of primary forest as a high priority activity. They are well along to meeting this goal and will probably surpass it. Considering the other important activities that also must be addressed, the team sees no need to alter this output. Again, FUNDECOR should be congratulated for this innovative approach. If USAID and FUNDECOR feel it is appropriate, the target could be increased.

FUNDECOR is currently discussing the possibility of adding secondary forest management to its activities. In 1992 there were almost 25,000 ha of secondary forest (16,694 ha) and charral (7,854 ha) in the ACCVC's buffer zones. There was also a significant area of pasture with trees. Management of secondary forests for timber production or other appropriate uses should be added to FUNDECOR's land use portfolio. Management of secondary forests is usually less expensive than the establishment of plantations on degraded land, more likely to provide appropriate habitat for biodiversity, and is more likely to attract ecotourists. If deemed appropriate, this is an activity that could easily be included in this output, if so modified.

Output 4. One or more functioning enterprises or other types of associations such as the Eco-Camp proposal that combine management of the forest with its utilization so that the forest contributes sustained benefits to residents of the ACCVC and non-resident landowners.

Rationale. This output merely combines a project paper output with its counterpart in the FUNDECOR logical framework to make it clear that opportunities must be sought to insure that both the landowners and the residents of the ACCVC must benefit from natural resource conservation activities if natural resource degradation in the ACCVC is to be permanently halted. FUNDECOR's Eco-Camp proposal can provide benefits for both landowners and residents of the area and should, for the reasons earlier stated, be supported. FUNDECOR should continue to use such imaginative approaches to identify and promote other appropriate conservation and development activities. There may be an opportunity to increase the value of the forest by harvesting orchids and other epiphytes from felled trees during the logging operation.

Output 5. FUNDECOR agreement with one or more research and education institutions to jointly seek funding to monitor the long-term impact of logging and management on primary and secondary forests and suggest changes in silvicultural practices.

Comment. The management of natural forests in a successful manner is a recent phenomenon in Costa Rica (as well as elsewhere in the tropics). Much remains to be learned

about the effect of gap size on natural regeneration, growth rates of trees left for the next harvest, pre- and postharvest silvicultural treatments, and the impact of harvesting on biodiversity, soils and water, etc. CATIE and FUNDECOR are working together to research some of these questions at the El Corinto demonstration forest. This effort needs to be expanded as soon as possible to include other sites, parameters, and collaborators. Again, if additional funds are needed, FUNDECOR and its collaborators should work together to prepare proposals and seek funds. A related opportunity for collaboration would be for FUNDECOR to invite taxonomists (especially botanists, entomologists, and herpetologists) from groups such as INBio, UCR, OTS to be present during harvesting operations to collect specimens of canopy species. Possibly some of these species, if rare, could be reestablished elsewhere.

I. Introduction of Trees on Farms

II. Modifications and Strengthening of Existing Outputs

Output 1. FUNDECOR establishes 1,000 ha of native species plantations, as an economically productive alternative, on those non-forested lands classified as incapable of sustaining agriculture, and provides training in plantation management to landowners.

Comment. This is more specific than existing outputs related to the establishment of native species plantations and provides explicitly for the training of landowners participating in this activity. The number would be FUNDECOR's original goal, which will be met by the end of the year. The team does not recommend a more ambitious goal because of the team's belief that this should be FUNDECOR's lowest priority forestry activity after (1) management of primary and secondary natural forests, (2) promotion of secondary succession on degraded pasture and cropland, and (3) development of appropriate agroforestry models for the ACCVC. Usually, the establishment of plantations is the most expensive means of establishing forest cover. Considering the unknowns and risks involved in native species plantations, this should not become a higher priority activity until much more is known about the performance of native species plantations and their impact on biodiversity and soils. FUNDECOR probably already has all the ingredients (seed and seedling production and planting programs with CACSA, CACSI, and UPAGRA) in place to exceed this goal with little additional effort.

Output 2. FUNDECOR collaborating with community development organizations active in the ACCVC and providing training and technical and/or financial assistance to grassroots organizations active in furthering appropriate natural resource use in areas that influence the community.

Rationale. Probably the single most important element to FUNDECOR's continued success will be its ability to reach out and eventually include the majority of the residents of the ACCVC as participants in and beneficiaries of its programs. Only when the majority of the population understand their role in managing and benefiting from the management of the region's natural resources (forests, soils, water, and biodiversity) will conservation and development become truly compatible and sustainable. FUNDECOR must work harder to understand and respond to the needs of the ACCVC's residents. Before moving very far in this area, FUNDECOR will have to increase its ability to provide appropriate agroforestry

models for use in the ACCVC. A goal of 7 organizations is purposely set well within FUNDECOR's reach because of the team's belief that (1) FUNDECOR has enough on its plate for the next two years, (2) FUNDECOR should spend time on developing an outreach program that includes a strong environmental education component, and (3) FUNDECOR will need to develop appropriate agroforestry models (see below) as part of its grassroots program. CARE and PRODECO are two organizations with outreach programs in the ACCVC that might benefit from an association with FUNDECOR. OTS is developing environmental education and community outreach activities that could contribute to FUNDECOR's efforts.

12. New and Essential Outputs

Output 3. FUNDECOR, in collaboration with one or more research institutions and possibly other organizations, including community outreach/development organizations, prepare a strategy and research/development proposal for pursuing agroforestry and promotion of secondary forests strategy in the ACCVC. Such a plan must address the needs of the ACCVC landowners currently involved in unsustainable agricultural activities.

Comment. There is much debate and discussion regarding what role, if any, agroforestry should take in the ACCVC. Some interesting prospects were observed. Some research is being done throughout the region. The team is of the view that there are opportunities which for a variety of reasons are not being addressed. More analysis and strategy development is needed.

FUNDECOR should begin as soon as possible to work with other organizations to develop an appropriate strategy, including models for use in the ACCVC's varied ecological zones on land appropriate for agricultural use as well as land not appropriate for such use. As mentioned above, agroforestry and secondary models will be a necessary part of any natural resource management program designed to address the needs of the majority of the ACCVC's residents. While addressing natural resource management throughout the ACCVC will not necessarily guarantee the sustainability of the ACCVC's protected areas, it is the team's view that failure to address it will almost surely guarantee the eventual destruction of the system. Both CATIE and OTS are currently working on agroforestry and secondary forest models and have collaborated on agroforestry activities in the past.

The development of this plan to include the most appropriate models will be of great value for future strategy planning and to demonstrate to potential collaborators the careful thought that has been given to this topic.

J. Technical Assistance Contract

Sections II.F. and III.E. provide an overview discussion of the technical assistance services provided by FUNDECOR under the FORESTA project through the Price Waterhouse/CATIE contract. This contract provides for three long-term advisors, and institutional development, administrative and financial management, and forestry and natural resources management expertise. In addition, short-term technical assistance to complement FORESTA's objectives has been provided. The discussion here will focus on contract performance and future ideas.

J1. Contract Performance

During interviews with appropriate FUNDECOR and USAID personnel, questions were asked about the performance of the advisors and overall Price Waterhouse management. In addition, a review of the expected contributions of these advisors as outlined in their contract was done. The impression gathered throughout this exercise is that in general, this was a successful technical assistance contract. Some extremely high quality personnel were provided, and most of the team was well integrated within the FUNDECOR system. Some volunteered that the advisors were solid members of the FUNDECOR team. The present executive director, Franz Tattenbach, the former institutional development advisor, is an example. He is also a good example of some of the high quality personnel recruited and assigned to the project. Froylan Castañeda, the forest and natural resources management advisor, is a highly committed and extremely knowledgeable expert, and well regarded within the professional community and is key part of the FORESTA team. He has made important contributions to the forest management. He is presently serving as the project's technical liaison with USAID, in addition to his advisory work.

A series of management systems/manuals covering all financial and administrative support services were developed and incorporated. According to the USAID financial analyst assigned to FORESTA, the accounting and financial management systems prepared are one reason why in a two-year period, the external audit reports have developed few major observations. All manuals appear to be well utilized.

Ten short-term consulting services were provided under the project, including major assistance in the recruitment of the relatively new director for administration and finances and in the preparation of the development and investment plan for the ACCVC. There would have been additional short-term computer service work under this contract had the services requested been provided directly from the San Jose office instead of their Honduras office.

Quarterly reports have generally been timely, although recently, some delays were observed. These reports are well regarded by the current USAID project officer and the team found them to be an informative reference. The Price Waterhouse contract supervisor, an individual with extensive experience with USAID contracts in Latin America, regards this project and its initial accomplishments as one of Price Waterhouse's best.

J2. Future Directions

Presently, there is a contact amendment under review in USAID Guatemala to make funding redistributions to cover previously incurred expenses. Major adjustments in the level of effort are not programmed.

Dr. Castañeda's contract terminates next year. He is an extremely valuable and respected resource, uniquely suited to help FUNDECOR move forward on the many fronts where progress must occur prior to the PACD. The project will require considerable help to address the above points. He is well suited to address the task and also well served to help USAID provide the targeted assistance mentioned in Section IV. The team strongly recommends that his services be continued either through the present contract or the most

appropriate means so that additional help to ID and FUNDECOR can be provided until the project terminates. In that regard, a more clearly defined scope of work should now be developed to reflect the recent modification of his work and more clearly define his work responsibilities.

SECTION VIII

INDICATORS FOR ASSESSING READINESS TO RECEIVE ENDOWMENT

A. Background

The previous section provides, overall, a positive view of FUNDECOR's institutional capacity to continue progress toward addressing the program's purpose statement. Many of the basic institutional development programs are in place, including: (1) dedicated and quality personnel, (2) exceptional leadership, (3) good management and operations systems, and (4) monitoring and databases that permit sound management decisions and program adjustments to be made. The evaluation team has a very good impression of FUNDECOR's capacity to move forward, and we provided some targeted suggestions to accelerate that process.

The priority activities and outputs developed in Section VII, which we deliberated for some time, are points that are achievable and vital for the future. When taken together, an exceptionally solid institutional base will have been provided, one that may serve as a model for other countries. The stakes are high! For if such activities are not taken, a less formidable system will be in place.

B. Project Purpose and Endowment

According to the Project Paper, The most important factor for appraising EOP status will be that FUNDECOR is a "permanent self sustaining private organization." The endowment and the rapid expansion and focusing of the activities that FUNDECOR has already started on in the area of fund-raising, community participation and environmental education, and research and training are some of the principle means to assure that this EOP will be achieved—particularly since new funds will be needed and these are the themes where much of the interest lies. At this juncture, the assurance of a secure funding source to cover operational expenses is the highest priority, but all others must also be moved forward.

During the past year senior leadership from the key institutions directed considerable effort to create a structure that would secure a sure funding source beyond the PACD. A tremendous amount of energy and emotion went into the process. While it is not the role of this team to judge, we believe that this process did not facilitate the establishment of the close ties the team feels are vital, given the limited time remaining. This was an emotionally bruising period, but much was learned. We are concerned that we see no one picking up the pieces from that period and moving forward with a strategy for moving to closure quickly.

C. Some Working Precepts

The evaluation team does not have the expertise nor the mandate to develop that strategy or to provide suggestions on how it might function. However, we feel it is of such importance (and since we had the pleasure to talk with so many key actors of the process), we felt that our comments should be shared.

C1. There Will Be Risks

There is no system respectful of existing legal and institutional conditions that will permit the risk-free arrangements that all parties have sought. Consequently, for this effort to quickly succeed, much will depend on the quality of the systems developed and good faith and integrity generated by pragmatic "partners."

C2. Preserve Financial and Technical Integrity

One institutional recommendation received by interested parties was that the separation of fiduciary from benefactor is an institutional concept that should be maintained. One of the commonly held views by leading professionals and government officials is that safeguards that do not include technical safeguards are ill advised. FORESTA executes a series of complex biological and socioeconomic processes which, in most instances, have not been tested. Monitoring systems must be installed to evaluate these experiences. Radical strategic and programmatic shifts that do not take into consideration these realities will threaten the success of the program. A long-term, technically focused program development strategy is crucial for FORESTA's long-term success. Therefore, for the same reasons that prompted leadership to look for special approaches to preserve the financial integrity of the program, firm technical direction must be developed.

C3. Fiduciary Arrangements

It is not within the team's capacity to make recommendations on such matters, except to observe that appropriate safeguards, managed in the most cost effective fashion, form the basis for any institutional decision. The team's financial analyst can be consulted further on such matters. However, we believe that fiduciary arrangements do not have the capacity or mechanisms for assuring that important technical judgements are provided during the annual budget review phase (at least in the subject matter FORESTA embraces). This limitation is of concern to the team.

C4. Technical Advisory Board (TAB)

Some discussions on the formation of a technical advisory body have been held. We support this effort, and, to help accelerate the process, offer some suggestions. A group of six to nine Costa Rican and U.S. notables, knowledgeable in the field of conservation and development (including biological scientists, social scientists, development practitioners, foresters, and agriculturalists) with diverse international experiences should be sufficiently large to embrace the subject matter and small enough not to be unwieldy. The Costa Rican with the most years on the Junta should be the individual on the TAB.

The TAB would meet periodically—quarterly at a maximum and semi-annually at a minimum—to review and discuss progress. Their opinion would be sought on the selection of FUNDECOR's executive directorship, when vacancies occur, and to make judgements annually of the FUNDECOR yearly budget. The FUNDECOR budget would first be sent to the Junta, who would make their recommendations and then forward them to the TAB. When reviewed and approved, a letter would be sent to the fiduciary, which would serve as the approval for the next annual tranche based on the annual plan.

One approach for starting this process is to have USAID meet with MIRENEM, and, possibly, a representative from the Ministry of Foreign Affairs to discuss the responsibilities and qualifications of the TAB. FUNDECOR could nominate people for the TAB but the above mentioned would decide. An agreement based on the working arrangements would be signed by the four institutions (USAID, MIRENEM, FUNDECOR and the Ministry of Foreign Affairs).

FUNDECOR would serve as the executive secretary for the Junta to provide logistical and information services. That position could be staffed by the director of planning.

D. Indicators

We suggest the following measures.

D1. GOCR Commitment

Indicators of political interest and support are essential, given the still small and somewhat fragile status of FUNDECOR. While political changes take place regularly, to best assure some indication of present and future interest, USAID should request a letter from the Ministry of Foreign Affairs highlighting their interest and commitment towards FUNDECOR and the FORESTA objectives.

D2. FUNDECOR Commitment to the FORESTA Purpose

While admitting that the successes over the last few years have been formidable, the team has developed some reservations regarding the perpetuation on the current approach to sustainable management in the ACCVC. No efforts are presently underway to develop, over time, other conservation and development initiatives more in keeping with the original precepts. If perpetuated, such a trend will not generate the type of outcomes anticipated and will not sell to other potential subscribers. One means to reassure skeptics would be to forward the ACCVC strategy document with a strong endorsement by FUNDECOR, including strategies for developing community participation and environmental education, research and training, and marketing and fund-raising in ACCVC during the next five years.

D3. Subscriber Interest

There have been some interesting efforts to obtain additional funds and the Junta has made this a high priority item. Some activities are underway but there is no marketing strategy and the institutional commitment to put this at the highest level is needed. Future program success goes beyond the endowment fund, and focused steps must now be taken. A strategy statement needs to be developed and should indicate potential supporters. FUNDECOR should present this material to USAID.

D4. Professional Interaction

Small organizations with broad mandates need to update and expand their knowledge base via networks. Networking provides intellectual, financial, professional, and political support. Although FUNDECOR has made important efforts at networking with the large

number of Costa Rican and global centers, it did not do this type of activity on a systematic basis. A review of their strategy in this area with USAID would be helpful.

D5. Financial Controls

Based on the team's review and consultations, very good financial management systems exist. To help assure continued compliance with these systems and appropriate oversight, additional efforts are needed. FUNDECOR should agree that the annual external audit review process be continued beyond the PACD, and so advise USAID. Further, the foundation law requires that the Controlaria review financial reports, including audits. In light of this mandate, after substantive conversations with the Controlaria to assess their commitment to fully respect this provision, a letter from them to USAID stating this is recommended.

TERMS OF REFERENCE FOR A MID-TERM EVALUATION OF THE FORESTA PROJECT

I. ACTIVITY TO BE EVALUATED

TITLE: Forest Resources for a Stable Environment
(FORESTA)

PROJECT NUMBER: 515-0243

LOP FUNDING: \$7,500,000 DA Grant
\$15,000,000 ESF Generated Counterpart
Equivalent

LOP DATES:
Bilateral Assistance Agreement signed: April 28, 1989
Cooperative Agreement with FUNDECOR: June 1991-March 1996

PACD: March 1996

IMPLEMENTING INSTITUTION: The Foundation for the Development of the
Central Volcanic Cordillera (FUNDECOR)

II. PURPOSE OF THE EVALUATION

This mid-term evaluation has two purposes. The first purpose is to review the progress toward achieving FORESTA Project outputs at the mid way point of project implementation and to review the strengths and weakness of all programs being carried out by the Foundation for the Development of the Central Volcanic Cordillera (FUNDECOR). The evaluation will examine progress to date against FORESTA Project outputs as defined in the project logical framework, review original outputs and recommend if they are still valid, suggest new outputs not originally contemplated, and review new activities FUNDECOR has undertaken that were not originally part of the Project.

The second purpose of the evaluation is to assess the institutional development and implementation capability of FUNDECOR and develop a set of threshold indicators

which the Mission may use to determine when FUNDECOR as an institution is mature enough to qualify for its local currency endowment. One of the FORESTA project's main outputs is to leave in place a strong regional environmental NGO which can work closely with Government of Costa Rica (GOCR) institutions to conserve and manage the natural resources of the Central Volcanic Cordillera Conservation Area. As AID is looking to phase out its assistance programs in Costa Rica in the near future it is important to evaluate FUNDECOR's capability to administer and implement natural resources management projects without AID assistance.

The evaluation will assess progress to date in the development of FUNDECOR, its mission and objectives, its future sustainability, the effectiveness of its Administrative Board, administration and technical staff. The ability of the institution to capture future funding and other avenues contributing to the viability of the foundation should also be addressed.

The evaluation report will provide empirical findings directed at questions and issues described below and provide recommendations to improve implementation of the FORESTA Project and the development of FUNDECOR. In addition, the evaluation report should provide lessons learned that may emerge from the analysis.

This evaluation will be carried out by the Development Strategies for Fragile Lands (DESFIL) Project, through a buy-in to the DESFIL contract. Given the nature of this project and that USAID implements projects similar to FORESTA in various bureaus, the lessons learned from this evaluation should be of value and interest to many USAID missions. DESFIL's ability to synthesize, analyze and disseminate the conclusions and lessons from FORESTA Project on a world wide basis, make it a natural candidate for this evaluation.

III. BACKGROUND

On April 28, 1989, AID signed a bilateral assistance agreement with the Government of Costa Rica to "help to improve the management and use of Costa Rica's protected areas and of the buffer zones surrounding them through improved land use management and planning, enhanced integrated forest industry, and expanded community awareness and participation within the Central Cordillera". Once the Costa Rican government met initial conditions to disbursement of funds (March 1990), AID contracted Price Waterhouse to assist in establishing FUNDECOR as a functioning institution. Price Waterhouse, together with a 3-person FUNDECOR staff, developed all administrative procedures, manuals and computer systems necessary for FUNDECOR to manage funds and implement field activities. In June 1991, USAID/Costa Rica signed

a Cooperative Agreement directly with FUNDECOR for the implementation of the FORESTA Project.

The FORLSTA Project has four components:

General Operations includes institutional strengthening of FUNDECOR, the development of an overall Strategy for the Central Volcanic Cordillera Conservation Area (approximately equal to the FORESTA Project area), improvement of the forest protection program, establishment of multi-use operations centers for forestry and park activities in strategic locations throughout the project area, and the development of an environmental education program. As part of the institutional strengthening of FUNDECOR, the GOCR and USAID have created an endowment fund of approximately \$10,000,000 equivalent to ensure the financing of FUNDECOR's core budget needs, once the FORESTA Project has terminated.

Management of Protected Areas includes the development of park management plans, demarcation of protected area boundaries in the field, improvement of the parks protection program, and improvement of visitor services and infrastructure.

Management of Natural Forest for Production includes assistance to landowners to prepare and implement forest management plans and establishment of one or more private forest enterprises.

Integration of Trees on Farms includes reforestation of areas deforested that are suitable for forestry, development of native tree nurseries, and incorporating trees as a crop, windbreaks or live fencing on agricultural lands as appropriate.

In 1992, the Minister of Natural Resources, Energy and Mines appointed a new FUNDECOR Administrative Board which reviewed the ongoing activities of the foundation and developed a new series of medium-term objectives. Some of these objectives fit within the FORESTA Project while others do not. The new Board placed greater emphasis on management of remaining forest cover and developing ecotourism in the region, while playing down the importance of reforestation and agroforestry activities. Due to this new emphasis and to other factors, FUNDECOR has surpassed some project outputs, while others are behind schedule.

FUNDECOR's main counterparts in the implementation of the FORESTA Project are the staff of the Costa Rican Park Service (within the Ministry of Natural Resources) who are assigned to the parks and protected areas of the Central Volcanic Cordillera

Area (ACCVC - Spanish acronym), and the landowners in the buffer zones surrounding the protected areas.

IV. STATEMENT OF WORK

A. Specific Tasks

As mentioned earlier, this evaluation has two objectives, hence two major tasks: a mid-term evaluation of progress toward project outputs and a threshold institutional assessment of FUNDECOR. In both regards, the Contractor will review all project documents and files, visit project offices and field sites and interview all relevant FUNDECOR, MIRENEM, AID, and other personnel, taking into account the following series of questions and topics.

1. Progress Toward Achieving FORESTA Project Outputs;

The Evaluation Team will describe and analyze progress made toward achieving FORESTA project outputs. The team will use the original project logical framework, the cooperative agreement and the bilateral assistance agreements as guidelines. In addition, the team will evaluate the new modified logical framework to determine if it better fits the project purpose and current project implementation. The team will also evaluate all the current project components and other FUNDECOR programs to determine which components or programs have been successful (i.e. have reached their targeted beneficiaries, have made an impact in the field, have helped maintain forest cover in the project area, etc.). Other aspects of Project outputs that the team will evaluate include: originally designed or added activities are no longer critical to the achievement of the project goal and objectives; activities which need to be redesigned; and new activities not originally contemplated under the FORESTA Project. When assessing these activities the team should consider:

- a. whether these activities have an appropriate balance between conservation of biodiversity and sustainable production (i.e. can a direct link between the productive activities and conservation of biodiversity be shown?);
- b. whether there is synergy among the components;
- c. whether the resources invested in the activities are an appropriate, effective and efficient use of FORESTA resources;

- d. whether gender issues have been appropriately considered in the design and implementation of project activities;
- e. whether the investment is paying off in terms of impact in the field; and
- f. whether the scale of the project is appropriate (too big or too small)

In considering the Project-wide Activities Component, particular attention should be given to evaluating the Global Development Strategy for the ACCVC, (does it make sense, is it implementable?), FUNDECOR's environmental education program, FUNDECOR's collaboration with other conservation NGOs, research institutions and GOCR agencies that operate in the ACCVC, and the degree of public participation in the design and implementation of ACCVC-wide activities.

With respect to Protected Area Activities, the Evaluation Team should focus on the effectiveness of the FORESTA Project's investment in the protection program, the innovative aspects of the programs jointly implemented with the Costa Rican Park Service, and the functioning of the interagency steering committee (Grupo Base).

In the natural forest management, agroforestry, reforestation and ecotourism components, the Evaluation Team should examine carefully the links that these activities provide to maintaining biodiversity and natural forest cover in the ACCVC. Are the activities being developed in the 'buffer zones' reducing pressures on the parks or reserves they are trying to protect? Is there a direct link between the buffer zone activities and the protected areas? Are FORESTA Project beneficiaries the real source of pressure on the protected areas? Are project beneficiaries passive or active collaborators in maintaining forest cover and protecting parks? Has there been any multiplier effect? Are the activities financially and environmentally sustainable?

AID Project Management: The Evaluation Team will also assess USAID's effectiveness in managing the Project. Has AID been responsive to FUNDECOR's needs? Do paperwork and approvals get processed in sufficient time so as not to affect project implementation? Is there direct, open communication between project staff and the USAID technical office responsible for project management? In which areas does USAID need to improve its management of the project?

Project Technical Assistance Team: The FORESTA Project and FUNDECOR have received technical assistance from a consortium of Price Waterhouse/CATIE since September 1990. The assistance includes an institutional development/financial administration advisor (PW) and a forestry/natural resources management advisor

(CATIE). The Evaluation Team should evaluate the technical assistance team's performance in providing needed expertise in a timely manner, how well the team served in its role as advisors, promptness of response, and finally possible technical assistance priorities for the remaining 15 months of the TA contract.

2. Institutional Analysis of FUNDECOR

The Evaluation Team will carry out an organizational and management assessment of FUNDECOR which will analyze the Foundation's organizational structure, and management policies and procedures to determine if they are appropriate and adequate to carry out FUNDECOR's mission, goals and objectives. This part of the evaluation is intended to provide USAID with a threshold determination of FUNDECOR's viability and future sustainability. USAID and MIRENEM will use the information and analysis from this evaluation as part of its determination of FUNDECOR's eligibility as the beneficiary of a \$10,000,000 dollar trust fund.

The Contractor will: (a) review all pertinent FUNDECOR documents, such as the foundation's incorporating act, the by-laws of the Administrative Board, the FUNDECOR Mission statement, the goals and objectives of the foundation as proposed by the current Administrative Board, FUNDECOR's operating principles, other FUNDECOR policy documents, and any other document which articulates the functions, purposes, objectives and role of FUNDECOR vis-a-vis conservation and management of natural resources in the ACCVC; (b) interview the founders of FUNDECOR, past and present Administrative Board members, key FUNDECOR executive staff, personnel from the Ministry of Natural Resources and USAID to analyze the following aspects of the institution:

A. What is the nature of FUNDECOR as recognized under Costa Rican law? What are its functions and limitations under the law? Which aspects of FUNDECOR's structure enhance its ability to carry out its mission? Which aspects of its structure detract from its mission?

B. What are the mission, purposes, goals and objectives of FUNDECOR? Are they expressed in written form? Are they clearly defined, and can the Administrative Board and FUNDECOR staff articulate them? Are they accepted by the Staff and the Administrative Board? Are they being carried out? Are they appropriate for FUNDECOR? Does FUNDECOR have the staff and systems capability to carry them out? Are there systems in place to allow for reviewing FUNDECOR's approach to natural resources management and mechanisms for adapting the institution's structure and programs to new approaches? Is FUNDECOR engaged in activities that are consistent

with the purposes and objectives set forth in its charter? Is FUNDECOR's role in the conservation and management of the natural resources base in the ACCVC clearly defined and understood by all parties?

C. Administrative Capability

(1) Administrative Board

The Evaluation Team should describe and analyze the FUNDECOR Administrative Board addressing the following questions:

How are the Board members selected? Is the selection process sufficiently open to allow broad participation? How long are their terms? Are terms staggered so as to allow continuity on the Board? Does the Board maintain effective policy and administrative control of FUNDECOR? What type of decisions are made by the Board? Does the Board actively participate in providing guidance to FUNDECOR Executive staff? Are all Board decisions clearly documented both with respect to initial decisions and follow through? What is the Board's style of operation? (e.g. how do they allocate their time and attention to FUNDECOR's needs). Is the Board's style of management effective and is it appropriate for the type of institution it governs?

(2) FUNDECOR Organizational Structure and Personnel

The Evaluation Team should describe and analyze the following aspects of FUNDECOR's organizational structure and staff. Describe the organizational structure of FUNDECOR. Is there a formal organigram of the institution? Is it adhered to in practice? Describe the levels of authority in FUNDECOR.

Does the organizational structure facilitate or hinder FUNDECOR in obtaining its goals and objectives? Should it be modified to improve the functioning of FUNDECOR? If so, recommend alternatives for modifying the current structure.

Describe the principal functions of the Executive Director and other key staff (office directors). How does delegation of authority function? How are decisions made and by whom? Are there problems due to lack of or excess of delegation of authority, poor administration, lack of defined responsibilities, poor operations? Is there consistency in understanding or implementing objectives? Are there gaps or conflicts in authority to make decisions that effect the functioning of FUNDECOR? Are there too many or too few persons involved in decision making? Is FUNDECOR adequately staffed to carry out its mandate? Does it have specialized personnel that allow FUNDECOR to function

smoothly and effectively? Is there a personnel development plan? Is it being adhered to? Does FUNDECOR provide sufficient training opportunities to its administrative and technical staff in order to develop and retain its cutting edge skills in the sector? Does FUNDECOR need additional staff? Have there been long vacancies of key personnel which contribute to the deterioration of the functioning of FUNDECOR? Are there clear personnel policies and procedures? Do executive staff and line staff understand the supervisor/staff relationships? Are there clearly defined lines of responsibility? Does FUNDECOR have adequate monitoring and evaluation systems which enable them not only to provide feedback to the operations division, but to also monitor the long term impact of FUNDECOR activities on the protection of biodiversity and natural forest tree cover?

(3) Managerial Capability and Financial Management

The Evaluation Team should describe and analyze the following aspects of FUNDECOR's managerial capability. The Evaluation Team should refer to the external audits of the Foundation for background information on the financial management aspects of this evaluation.

Briefly describe the financial management role that FUNDECOR plays in the management and conservation of natural resources in the ACCVC. Does FUNDECOR have a strategic plan? Does it match with a financial plan? Describe the types and number of accounts FUNDECOR maintains. Are each of the funds FUNDECOR manages directed for specific activities? Are the purposes of the funds clearly defined and understood by FUNDECOR? Is the administration organized in such a way and are lines of responsibility clearly defined so as to facilitate the processing of procurement, administration of personnel, accounting, administration of finances, internal auditing and other administrative functions? Are internal control systems adequate to achieve FUNDECOR goals, objectives, and programs? Does FUNDECOR have the capability to award and administer contracts for the procurement of goods and services?

Taking into account FUNDECOR's current level of recurrent costs and the projected annual income generations FUNDECOR will receive from its trust fund will FUNDECOR have the financial resources to enable it to perform normal recurring functions and activities? Will FUNDECOR be a financially self-sustaining institution once FORESTA Project funds have run out?

V. METHODS AND PROCEDURES

As mentioned in the Scope of Work Section, the Evaluation Team will review all pertinent documentation, provided in advance of the evaluation by USAID and FUNDECOR, carry out interviews with key individuals in FUNDECOR, USAID, MIRENEM, CATE, Price Waterhouse, and others, and visit field sites. Interviews and field site visits will be set when the team arrives in country.

Preferred timing for the evaluation to begin is late April 1994. It is expected that the team will have two and a half weeks of fieldwork, one week of report preparation, and three days of briefings in country. In addition the evaluation team may have up to three work days in the U.S. to prepare for the field work and to read background materials, prior to arriving in-country. FUNDECOR and USAID will have three weeks to review the report and send comments to the evaluation team, who will then have two weeks to finalize the report. USAID will provide office space and computers for each team member. The Evaluation Team is authorized to work 6-day weeks while in country.

VI. EVALUATION TEAM COMPOSITION AND REQUIREMENTS

The Evaluation Team should be composed of:

- an institutional development specialist with development project experience with NGOs in Latin America, preferably in Costa Rica. This person should also have knowledge of administrative management and financing natural resources activities;
- an integrated conservation - development project (ICDP) specialist with experience in Latin America in assessing protected areas/buffer zone projects, i.e. project that link conservation of biodiversity in protected areas with social and economic development. This person will serve as the Team Leader. This person should have a natural resources, forestry or related academic background or experience.
- Tropical Forestry Specialist with experience in natural forest management, reforestation programs and commercial forestry.

The Evaluation Team should have experience in designing, implementing and/or evaluating USAID-financed projects as well as a Spanish language capability of S/3-R/3,

as most documents and interviews will be in Spanish. Good writing skills and creative thinking ability are also required.

VII. REPORTING REQUIREMENTS

The Evaluation Team will submit a draft of the evaluation report to USAID prior to leaving country. USAID and FUNDECOR will have 15 working days to review the report and submit comments to the Evaluation Team. The Team will then have 10 working days to submit the final report, once it has received comments from USAID and FUNDECOR. The report should be prepared in Spanish and in English and five copies in each language presented to USAID. The Evaluation Team can contract translating services in country, if needed.

The format of the report should be as follows:

1. **Table of Contents**
2. **Executive Summary:** State the objectives of the project, purpose of the evaluation, findings, conclusions and recommendations, and lessons learned about the design and implementation of these type of integrated conservation-development projects.
3. **Body of the Report:** Discuss the purpose and issues of the evaluation, the economic, political and social context of the project, team composition and evaluation methods, findings of the study concerning the evaluation issues and questions, conclusions drawn from the findings, recommendations based on the study findings and conclusions, stated as actions to be taken to improve project and FUNDECOR performance. The report should be no more than 30-40 pages. Any additional detailed discussions of technical issues should be included as appendices.
4. **Appendices** should include at a minimum a copy of the scope of work, the current project logical framework, a list of documents consulted, and individuals and agencies contacted.

ANNEX B
PEOPLE CONSULTED AND INTERVIEWED

I. Nongovernmental Organizations, Universities, Research Centers

Jim Barborak, Professor, University for Peace
Rebecca Buttefield, OTS
Jorge Campos, FUNDEVI, Universidad de Costa Rica
José Campos, Director, Fundación Neotropical
David and Deborah Clark, OTS
Patricia Folgarait, OTS
Manuel Guariguata, Forester, OTS
Gary Hartshoun, Vice President, World Wildlife
Rodrigo Gomez, IMBIO
Jeremy Haggar, Forester, OTS
Barbara Lewis, Academic Programs, OTS
Alonzo Matamoros, INBIO
Edgar Ortiz, FUNDEVI
Pia Paavy, Acting Director, OTS
Jorge Rodriguez, Director, Plan de Acción Forestal de Centro America
Joaquin Rodirguez, FUNDEVI
Raul Salorzano, Director, Tropical Science Center
Chuck Schell, Director, Organization of Tropical Studies
Vivienne Solis, World Conservation Union
Donald Stone, Executive Director, OTS
Meg Symington, Biodiversity Support Project, WWF
Joseph Tossi, Retired President, Tropical Science Center
Paula Turnapol, Information Coordinator, GreenComm-AED
Rodney Vargas, Researcher, OTS

II. CATIE

José Campos, Silviculture Leader
Phil Cannon, Director Magdalena Project
Jonathor Connelius, Forest Geneticist
Glen Galloway, Tropical Forestry Advisor
Iak Hilje, IPM
Carlos Navarro, National Coordinator
Carlos Reiche, Agroforestry
Carlos Rivas, NRM Chief
Rodolfo Salazar, Forest Seeds
Lawrence Scott, Forest Scientist

III. FUNDECOR

Eduardo Artavia, Junta Board Member
Mario Barenechea, Chair, Junta Administration
Adalberto Gorbitz, Director, ACCVC
Oscar Moroto, Forester
Edgar Ortiz Malavassi, Planning Director
German Obando, Forester
Alvaro Salas, Former Administrative Junta Member
Gustavo Solano Garro, Director of Operations
Gustavo Solis, Promotion
Franz Capra Tattenbach, Executive Director
Guillermo Vargas, Forester
Ricardo Villalobos, Administrative Director

IV. FUNDECOR Clients

Isias Alvarado, Nursery Owner
Emilio Cespedes, Natural Forest Management
Jovel Flores, Natural Forest Management
Vicente Paniagua, Plantation
Isidro Quesada, Plantation
Edwin Rodriguez, Plantation through CACSI (San José resident employed by INFOCOOP)
Pedro Rojas, President of the Board, Sarapiquí Cantonal Agricultural Center
Rafael Rojas, Plantation through CACSI (San José resident employed by INFOCOOP)
Carlos Salazar, Ex-President Municipio Puerto Viejo
Xinia Salazar, Regiadora, Canton de Sarapiquí
Carlos Luis Sebaja R., Natural Forest Management, Topographer, Rio Frio forest, Guacimo
Cecilia Ulate, AGROFORSA

V. Ministry of Natural Resources, Energy, and Mines

Alfredo Blanco, Planning Director, ACCVC
Herman Bravo, Diputado
Allen Carmona, Administrative Services
Juan Carlos Carmona, DGF
Adalberto Gorbitz, Administrator ACCVC
Carlos Herrera Arguedas, Director ACCVC
Ronald Mora Vargas, Protection Program Coordinator, ACCVC
~~Manfred Peters Saewers, Ministry of Natural Resources, Energy, and Mines~~
Juan Quijanilla, Accountant Advisor to Minister
Rodolfo Tonorio, Chief of Research, ACCVC
Edgar Villalobos, Diputado and Ex-Minister of MIRENEM
Carlos Zuñiga, Land Tenure and Democratization, ACCVC

VI. USAID and Costa Rican Government

Alexander Arias V., Financial Analyst
Enrique Barrau, Deputy Agriculture Development Officer
David Heesen, Agriculture Development Officer
Anne Lewandowski, Environmental Officer
Michael Maxey, FORESTA Project Officer, Program Officer
Richard Wheldon, Acting Director

VII. USAID/Washington, D.C.

Phillip Church, PPC/CDIE
Jaime Correa, BHR/FFP/DP
Dave Gardella, LAC/DR/RD
Dave Gibson, G/RD/ENR

VIII. United States Government Individuals and Organizations

Walter Dunn, U.S. Forest Service, Sister Forests
Jan Engert, U.S. Forest Service
Francesca Grifo, NIH
Scott Lampman, U.S. Forest Service, Forestry Support Program
Gary Wetterberg, U.S. Forest Service

IX. Miscellaneous

Fraylan Castañeda, Principal Advisor, Price Waterhouse
Carlos Brenes Castillo, Social Promoter, FAO
Albert Scaff Brown, Consultant, Chemonics International
Alvaro Jaikel Chacón, Price Waterhouse
Josh Dickinson, Tropical Research and Development
Paul Flores, Chairman, Price Waterhouse
David Joslyn, Deputy Director, IICA
Robert Peck, Consultant, Tropical Forestry
Rigoberto Stewart, Economicst, Stewart & Associates
Henry Tschinkle, Forester, USAID/ROCAP
Luis Zeledon, Price Waterhouse

**ANNEX C
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ANNEX D
OVERVIEW OF ACTIVITIES WITH RESEARCH AND
EDUCATION INSTITUTIONS

CATIE

FUNDECOR is already monitoring landscape change at the regional level, e.g., deforestation, forest fragmentation and land use change using satellite imagery and GIS. CATIE was instrumental in setting up this kind of monitoring by helping to establish FUNDECOR's GIS and training their personnel.

CATIE also provided initial assistance in seed storage and testing of native tree species. FUNDECOR and CATIE jointly manage the natural forest at Finca Corinto—Los Laureles. This is an easily accessible demonstration plot of 35 ha with an additional 87 ha to be brought under management. CATIE is also conducting studies on forest floor regeneration under canopy gaps created by cutting.

CATIE, with Price Waterhouse, was initially contracted to do the integrated management plan for national parks. This forms a significant part of the basis for park planning and management by FUNDECOR and the ACCVC.

FUNDECOR participates with CATIE in the Madeleña project which includes a network of Central American NGOs for forest extension purposes and the publication of "Guías Silviculturales."

FUNDECOR personnel frequently take specialized short courses and workshops at CATIE without charge or for a reduced fee. FUNDECOR shares training costs with CATIE for graduate student research. One master's degree was recently completed and the field research for the Ph.D. is currently underway by a German student on the effects of FUNDECOR forest management practices on the biodiversity of vegetation.

In short, FUNDECOR's relationship with CATIE is a strong one, and will continue to be a source of mutual benefit to both institutions.

Organization for Tropical Studies

FUNDECOR has an increasingly important and productive relationship with OTS. The executive director of FUNDECOR was recently appointed to the **Technical Advisory Board of OTS** which implies a high level of mutual trust and respect. One result is that OTS research outside of La Selva will be done in the buffer zone and will have some direct or indirect application to land management practices.

FUNDECOR has a seed tree contract with OTS whereby OTS was paid to select 210 seed trees (30 individuals of seven species) at La Selva, in Braulio Carillo and on private forest land. The owners are paid to protect these trees, which is an additional economic incentive to keep trees standing. OTS trained FUNDECOR field personnel in tree climbing and seed collection.

While FUNDECOR is already monitoring regional landscape changes, it has recognized the urgent need to begin to monitor ecological change at the micro-level, including impacts on biodiversity, but not confined to biodiversity. FUNDECOR anticipates signing an agreement with OTS whereby OTS would monitor forest succession in managed forests after harvest.

FUNDECOR also intends to sponsor research on the largely negative impacts of forest fragmentation on biodiversity and the potentially positive impacts of creating forested corridors, not only on total biodiversity but also on the dispersal of species which require large, undisturbed habitat for survival. FUNDECOR hopes to contribute to the growing body of theory and knowledge related to fragmentation, corridors and biodiversity preservation. Discussions will be held with OTS and other institutions for collaborating on this kind of research.

An additional important aspect of FUNDECOR 's relationship with OTS is that FUNDECOR personnel (technical and executive) frequently give presentations to groups of visitors (including World Bank representatives and U.S. senators) to the OTS field site at La Selva. This kind of indirect outreach to the donor community and other influential decision-makers is building a wealth of good will toward, and understanding of, FUNDECOR and its activities.

Instituto Tecnológico de Costa Rica

ITCR has an excellent program in forestry, from which several FUNDECOR foresters have graduated. There is also a new graduate program in Bosque e Industria, which will likely be an important training source for FUNDECOR and for graduate research in the buffer zone.

ITCR provided technical training for tree nursery managers in the Puerto Viejo region. ITCR is now doing silvicultural work (thinning, liberation cutting) after harvest in the managed forests. It also cooperates in the seed contract with OTS and FUNDECOR, and has done some of the forest management plans for land owners in the ACCVC.

University of Costa Rica

The forestry department of UCR has also done some of the management plans. Discussions have begun with UCR to reach a broader, more comprehensive agreement for collaborative research within the ACCVC. There is also a potential link with the newly-created master's degree program in forest ecology, which includes not only traditional

production forestry but the ecological, social, economic and political aspects of forest management as well.

Instituto Nacional de Biodiversidad

Some dialogue has been opened with INBio, the Instituto Nacional de Biodiversidad. FUNDECOR recognizes that it must develop stronger links with INBio, in part because of the high cost of financing biodiversity inventory and research.

Inventory for the sake of scientific knowledge is a laudable goal, but this should not be within FUNDECOR's mandate. Rather it is the conservation and wise use of biodiversity that is of prime concern to FUNDECOR. In this light, it is encouraging to note that INBio has been receptive to sharing income generated by genetic discoveries with forest owners, thereby giving owners an additional incentive to maintain their forested lands. The "Society for Ecotourism," once formed among forest owners to promote "Ecocamps," will serve as an association of forest owners to work with INBio as well. FUNDECOR will also facilitate access to the managed forests of the ACCVC and will share their data base, particularly on trees, with INBio.

EARTH

EARTH is more of a training than a research institution. There are, however, some important links which contribute directly and indirectly to research activities. EARTH provided some of the training for tree nursery personnel, and there has been training by FUNDECOR of EARTH interns, which includes their research projects within the region. FUNDECOR also uses the EARTH campus to give courses and workshops.

The Prospects for Agroforestry in the Tropics

P.K.R. Nair

The World Bank
Washington, D.C.

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Executive Summary

Agroforestry has come of age remarkably during the past 10 to 15 years. However, the lack of a synthesized 'package' of technical and socio-economic information on agroforestry is a serious drawback in channeling development assistance to agroforestry projects. The objective of this report is to fill this gap. By reviewing the scientific information currently available, the report seeks to establish the scientific basis and principles of agroforestry and to evaluate field research on agroforestry practices; it also discusses the economic and socio-cultural aspects of agroforestry, as seen by a 'non-expert'. A comprehensive bibliography is appended to the report.

The emphasis in this report is on Africa, but extensive use is also made of experiences from other parts of the developing world to ensure that the report is applicable to all tropical regions. It is addressed primarily to agroforestry practitioners — both foresters and agriculturalists — of the World Bank and similar development-support agencies. The major findings of this report are summarized here.

1. Agroforestry is widespread in almost all ecological and geographical regions of the tropics. The large number of agroforestry systems can be grouped according to certain structural and agro-ecological criteria. Although the socio-cultural aspects of these systems may vary from one geographical region to another, and the level of intensity with which the systems are managed may differ, those operating in areas with similar ecological conditions tend to have structural similarities, so that it is possible to identify a few distinct agroforestry practices that constitute the bulk of diverse agroforestry systems. The agro-ecological and structural analysis of agroforestry systems and practices provides a useful framework within which to develop approaches aimed at improving indigenous systems.
2. The oft-repeated suggestion that agroforestry holds considerable promise as a practical land-management alternative for maintaining soil fertility and productivity is based on the assumption that trees and other vegetation improve the soil beneath them. Trees add organic matter, nutrients and growth-promoting substances to soils, they help reduce soil loss from erosion, and they improve the physical and chemical properties of soils. However, they may also have some adverse effects on soils. The net effect of all these factors will depend upon management and location-specific factors.
3. Nitrogen-fixing trees are a most promising group of agroforestry components. Because they are able to fix atmospheric nitrogen and contribute nitrogen via leaf and litter fall and root turnover, they have a dominant role to play in maintaining soil fertility. Few direct measurements of nitrogen fixation by tropical trees have been made, but the literature does identify some species capable of fixing 50-100 kg N/ha per annum when grown in agroforestry systems. In terms of the nutrient requirements of crops, the potential of nutrient input through leaf litter could be considerable. Another important way in which trees improve soils is through nutrient cycling. Unlike nitrogen fixation, which is an input into the soil, nutrient cycling involves the turnover of nutrients already within the soil; this includes the translocation of nutrients from soil layers which are beyond the reach of annual crops or pasture species. There is also a growing recognition of the importance of roots in agroforestry systems, both as components of primary production and in soil-fertility maintenance. The challenge here is to maximize the

beneficial effects of root and mycorrhizal systems, whilst reducing tree-crop competition for moisture and nutrients. Clearly, there is a need for more knowledge about all the soil-related benefits of agroforestry.

4. The above-ground interactions between plants in mixed systems are usually viewed as competitive, but some complementary interactions have also been reported. There is scientific evidence to support the contention that photosynthetic efficiency may be greater in a mixed system, comprising structurally dissimilar components, than in a monocultural system. An obvious additional advantage is that mixed systems produce a greater variety of products than monocultural systems.
5. Although agroforestry research is constrained by unclear methodologies and the sheer multiplicity of factors to be taken into consideration, some promising research projects are under way in the tropics. Most of them concentrate on alley cropping (and other forms of hedgerow intercropping), and plantation crop combinations. A detailed examination of the rapidly growing amount of information on alley cropping shows that, on the relatively infertile alfisols in humid and subhumid regions, this practice helps maintain reasonable levels of soil fertility. It is a low-input practice, rather than a no-input practice; that is, to obtain the best results there must be some fertilizer input. In most cases, alley cropping allows crops to make more efficient use of fertilizers than is the case in monocropping systems. However, in the semi-arid tropics and other dry areas, alley cropping is unlikely to significantly improve soil fertility. In extremely acidic soils, the relevance and success of alley cropping depends on the extent to which inputs such as fertilizers are used. An additional constraint of alley cropping is the relatively high labor requirement. In general, it is clear that while some areas would benefit from alley cropping, others would not.
6. Where plantation crops are grown under monocultural systems, available solar energy and soil resources are not utilized to the fullest extent. By growing agricultural crops with plantation crops, greater use is made of these resources. Several shade-tolerant and economically useful plants can be grown between or under a plantation crop during different stages of its growth. Many of the plantation crop combination practices currently in use illustrate the potential of this form of agroforestry. However, the particular ecological requirements for the growth of plantation crops impose a limit on the use of these practices.
7. The environmental benefits of agroforestry, other than soil-related factors, include micro-climate amelioration. In many parts of the tropics there is widespread use of windbreaks and shelterbelts. Windbreaks can also provide other benefits, such as poles and fuelwood.
8. Although a large number of traditional agroforestry systems have been reported, only a few have been scientifically studied, and hence there is inadequate scientific understanding of such systems. The little research that has been done indicates the scientific merits of these time-tested systems and points to several possibilities for improving them.
9. Agroforestry is considered to be a sound and potentially promising strategy to address some of Africa's land-use problems. The use of an ecological approach could be a basis for developing appropriate agroforestry designs. Four broadly homogeneous ecozones can be demarcated for agroforestry development in sub-Saharan Africa: the upland plateau of southern Africa (unimodal); the highlands of eastern and central Africa (bimodal); the semi-arid lowlands (the Sahelian zone); and the humid lowlands of West Africa. This report suggests the broad agroforestry approaches that, with appropriate site-specific modification, could be applied in all regions, as well as specific approaches for each region. Two particular issues that are relevant throughout sub-Saharan Africa are: the integration of agriculture, forestry and wildlife

management through buffer-zone agroforestry; and the use of under-exploited food-producing trees and indigenous knowledge in agroforestry design.

10. Economic studies of agroforestry have been carried out on a rather ad hoc basis and are generally *ex ante* analyses, based on assumptions, rather than *ex post* analyses based on field data. This is mainly because of the dearth of experimental station and on-farm data. Moreover, in many studies the focus tends to be on the long-term economic benefits of the main components of agroforestry systems, with little documentation on short-term benefits and by-products. Nevertheless, the limited information that is available does provide some indication of the economic advantages and limitations of agroforestry in a variety of situations. Now that methodologies for economic analyses of agroforestry projects are becoming available, more detailed studies, based on field results, can be expected. Socio-cultural issues also need to be analyzed if new agroforestry technologies are to achieve wide acceptance by farming families.

Several important conclusions emerge from this review.

- Agroforestry systems are many and varied, as are their functions, roles and outputs.
- There is ample scientific evidence to indicate that the benefits to be derived from agroforestry could be considerably increased by appropriate scientific intervention.
- Scientific studies in agroforestry have been very limited, and thus the potential of agroforestry remains vastly under-exploited.
- The main scientific foundation of agroforestry is the multipurpose tree. The success of agroforestry will depend upon the extent to which the productive, protective and service potential of multipurpose trees is understood and exploited (through research) and realized (through development and extension efforts).
- The current trend in agroforestry development shows an imbalance between large-scale development projects and inadequately low levels of research and educational support.

ANNEX F

**FACTORES DE PROYECCION Y DESEMPEÑO EN EL CAMPO DE LA
PLANIFICACION, PROGRAMACION, Y ADMINISTRACION
FINANCIERA DEL PROYECTO FORESTA**

**AGENCIA DE LOS ESTADOS UNIDOS DE AMERICA
PARA EL DESARROLLO INTERNACIONAL**

USAID

CHEMONICS INTERNATIONAL

**FACTORES DE PROYECCION Y DESEMPEÑO EN EL CAMPO DE LA
PLANIFICACION, PROGRAMACION Y ADMINISTRACION FINANCIERA
DEL PROYECTO FORESTA**

**Preparado por:
Edgar A. Briceño. Ph.Dc.**

Julio de 1994

INTRODUCCION

El presente documento contiene los resultados del estudio realizado sobre los aspectos financieros del proyecto Forest Resources for a Stable Environment (FORESTA), el cual es financiado en parte con fondos de la Agencia para el Desarrollo Internacional (USAID) y administrado por la Fundación para el Desarrollo de la Cordillera Volcánica Central (FUNDECOR).

Para el análisis de los temas referidos a la parte financiera, se contó con los términos de referencia preparados por la empresa de consultoría CHEMONICS, según los cuales, este estudio debería responder en la medida de lo posible dentro del plazo perentorio y la disponibilidad de información, a:

- a) Aspectos de proyecciones presupuestarias y
- b) Aspectos de administración financiera.

En el primer aspecto, la intención fue la de contar con elementos de juicio sobre las tendencias presupuestarias del proyecto; sobre el origen y aplicación de los fondos y sobre las condiciones y posibilidades de un financiamiento autosostenible del proyecto foresta en el tiempo.

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En lo referente al segundo aspecto, el interés se centraría en la evaluación de los instrumentos de planificación y de control de la programación financiera, en el desempeño de la administración del proyecto. En procura de tales objetivos se procedió a la revisión de los documentos resultantes de las rendiciones de cuentas del proyecto en poder de FUNDECOR, sobre la concepción del proyecto mismo, sobre las auditorías externas y otros en poder la representación nacional de la USAID.

Los principales elementos del análisis en cada uno de estos aspectos se presenta en las páginas siguientes.

I. SITUACION FINANCIERA

Para el análisis de la situación financiera de FUNDECOR, así como de sus perspectivas, se ha tomado como punto de partida la información contenida en el documento de proyecto; complementada con los datos que aparecen en el Convenio de cooperación, los informes anuales de auditoría, documentación interna propia de la Fundación y la información contenida en los registros de la US AID CR.

1.1 Tendencias presupuestarias

Uno aspecto inicial a destacar es que el proyecto FORESTA en el seno de FUNDECOR entró en verdadera ejecución en junio de 1991 y que durante el año 92, la nueva Junta promovió una redefinición de la estrategia global, aspecto que motivó cambios significativos de orientación durante ese año y los dos siguientes.

Esto significa que desde el punto de vista de los gastos, ninguno de los años transcurridos pueden ser considerados años típicos del proyecto originalmente concebido, ya que a) estuvieron sujetos a fuertes cambios y en consecuencia, pueden considerarse poca experiencia para ser utilizado en proyecciones y mucho menos para un plazo de cinco años de funcionamiento, y b) hay indicios que se derivan de los registros personales de los asesores del Proyecto, de que los costos unitarios de ejecución en varias actividades de los componentes del mismo, se han reducido por la experiencia acumulada en estos años.

Durante este periodo y como se verá más adelante, FUNDECOR ha evolucionado hacia una consolidación como institución. Ha perfeccionado los sistemas de administración financiera y programática pasando desde la concepción original de proyecto financiado con fondos de la US AID, hasta la idea de una institución permanente que pretende alcanzar la autosuficiencia y la perpetuación en el ambiente costarricense.

Muchas de las acciones que se han emprendido con la intención de mejorar los sistemas de presupuestación, hasta el presente año han sido puestos en vigencia como instrumentos permanentes de la administración de la institución.

La experiencia de los años precedentes se ha integrado en lo posible a través de nuevos sistemas que permitirán no solo una adecuada ejecución y control presupuestario, sino también una más precisa elaboración del mismo. El otro aspecto a considerar es que con una perspectiva de autosostenimiento, algunas de las actividades a desarrollar en el contexto del proyecto se han reorientado para que generen los recursos que el futuro generarán su autosostenimiento.

Tomando en cuenta estos elementos, los aspectos relacionados con el análisis de las tendencias presupuestarias se limitará a los temas relacionados con el Fondo Patrimonial, asunto que se discutirá más adelante.

1.2. Origen y destino de los fondos para el proyecto

El punto de partida en este caso lo constituyó la revisión del presupuesto inicial que aparece en la sección d) del documento de proyecto. Dicha sección muestra un presupuesto que considera un monto original de US\$ 7.5 millones en contribuciones de la US AID y la suma de ₡1.200 millones que sería la contrapartida del Gobierno de Costa Rica. En total se estimó en US\$ 22.5 millones, considerando un tasa de cambio de cambio de ₡80.0/US\$.

Sin embargo, las negociaciones se concretaron con la separación de los fondos en sus dos componentes: a) los fondos de la donación de AID se dividirían en dos partes: la primera directamente asignada al proyecto por un monto de \$5.0 millones y que sería administrada por FUNDECOR y la segunda parte de \$2.5 millones que sería administrada directamente por la US AID, para labores de apoyo y control

del proyecto, según se detalla a continuación:

USAID: Estatus Financiero del Proyecto FORESTA.
(al 12 de julio de 1994)
US\$

Elementos	Programado	Desembolsos	Pendiente de liq.
1. Grant	5.146.100	2.741.110	2.404.990
Acuerdo Cooperat.	5.000.000	2.615.003	2.384.987
otros elementos no especific.	146.100	126.107	19.993
2. Asesoría USAID	209.400	205.171	4.229
3. Asist. técnica	1.520.000	1.189.029	330.971
4. Audit. y evaluac.	135.000	-	135.000
5. inflac. y conting.	489.500	67.911	421.589
Total(US\$)	7.500.000	4.203.221	3.296.779

Fuente: US AID CR

b) el otro componente es el aporte estatal, inicialmente se estimó en ₡1.200 millones, inicialmente se programó para que, en una parte: (₡390 millones) apoyara los cuatro componentes del proyecto; en tanto que los ₡810 Millones restantes, se dedicarían a la constitución de un fondo patrimonial, el cual serviría para garantizar a futuro los recursos necesarios

para financiar las operaciones del Proyecto, más allá de marzo de 1996, fecha en que termina la primera etapa de FORESTA según convenio con US AID.

Varios factores derivados de la reorientación del proyecto por parte de la nueva junta y de las condiciones en que fue posible obtener los fondos de contrapartida del Gobierno, hicieron necesario llevar a cabo ajustes para no retrasar la programación del mismo.

Por una parte, en 1991, las negociaciones a través la Comisión del Gobierno de Costa Rica para la atención de todos los asuntos relacionados con la aplicación del convenio, finalmente convino programar y aportar los fondos de los recursos de moneda local disponibles para llevar a cabo el proyecto. Bajo los acuerdos de Estabilización y Recuperación Económica ESR VI y VIII, se asignaron todos los recursos posibles al proyecto Foresta.

Como parte de esas directrices, el Banco Central de Costa Rica transfirió en ₡967.5 Millones a una cuenta denominada FUNDECOR, quedando un remanente de ₡232.5 millones por transferir, debido a problemas más allá del ámbito de este

proyecto. Esta última cifra es de difícil recuperación por cuanto hay elementos más allá del proyecto que hacen difícil su recuperación.

Dichas negociaciones se dieron durante el año 1991, pero el Banco Central solo reconoció intereses sobre aproximadamente el primer título por \$180 millones, emitido en ese año. Intereses por un monto de \$50.08 millones. Los demás títulos empezaron a ganar intereses a partir de junio de 1992 y una vez retirados del Banco Central, pasaron a una custodia en el Banco COFISA, hasta tanto no se decida sobre la forma que este fondo sería administrado en el futuro.

Estos cincuenta millones fueren tomados como capital semilla para la creación del Fideicomiso FUNDECOR-BANCOOP No. 18-91, los cuales generaron \$11.7 millones por concepto de intereses que se dedicaron a financiar parte de los gastos operacionales del Proyecto.

Como resultado de estas negociaciones se acordó entre el Gobierno-USAID llevar a cabo modificaciones presupuestarias dentro del proyecto FORESTA a fin de que la totalidad de los fondos del aporte Estatal, se destinarían a la constitución

del Fideicomiso el cual, debería ser del orden de los US\$ 10.0 millones, a la fecha en que entrará en vigencia la segunda etapa del proyecto.

Por lo tanto, puede decirse que a la fecha, la mayor parte de los recursos para el desarrollo del proyecto han sido aportados por la US AID y que los fondos del Gobierno han sido asignados en su totalidad, excepto los derivados de los intereses iniciales ya mencionados, a la constitución del fondo patrimonial.

A este respecto, los cuadros 1 y 2 muestran respectivamente el origen y la aplicación de los fondos del proyecto, para las fuentes USAID y Gobierno respectivamente. La fuente de información de ambos cuadros son los estados de Rendición de Cuentas, preparados conforme las exigencias de la USAID.

Como puede apreciarse en el cuadro No. 1, de los US\$ 5,0 Millones, los gastos a junio de 1994, con cargo a estos fondos acumulan aproximadamente US\$ 2.9 millones quedando disponibles para lo que resta del año la US\$2.1 millones.

CUADRO 1
 PROYECTO DE RECURSOS FORESTALES PARA UN MEDIO AMBIENTE ESTABLE
 FORESTA: FONDOS DE US AID APLICADOS A LAS ACTIVIDADES DE FUNDECOR
 PERIODO 1991 - 94 *
 (en US\$)

DESCRIPCION	PRESU- PUESTO GLOBAL	GASTO REAL 1991	GASTO REAL 1992	GASTO REAL 1993	ACUMULADO REAL 1993	GASTO REAL 1994 *	ACUMULADO REAL 1994 *	BALANCE **
I. ACTIVIDADES GLOBALES	2,345,700	126,030	477,174	429,693	1,032,397	124,079	1,151,952	1,193,748
II. ACTIV. ESPECIFICAS								
A. MANEJO-AREAS PROTEGIDAS	734,200	18,190	135,010	275,911	429,111	203,119	632,254	101,946
B. MANEJO-BOSQUE NATURAL	288,000	5,842	44,940	202,413	253,195	110,007	363,202	(75,202)
C. PROTECCION PROG-REFORES.	700,000	3,087	134,793	131,208	269,088	54,979	324,067	375,933
D. APOYO A PERSONAL TECNICO	285,000	0	74,830	115,274	190,104	32,396	222,500	62,500
III. EVALUACION Y AUDITORIAS	150,000	0	7,811	9,583	17,394	15,393	32,787	117,213
IV. CAPACITACION DEL PERSONAL DE FUNDECOR.	0	0	0	0	0	11,774	11,774	(11,774)
V. INFLACION Y CONTINGENCIAS	497,100	0	0	10,466	10,466	144,430	154,896	342,204
TOTAL GENERAL	5,000,000	153,149	874,558	1,174,548	2,202,255	696,177	2,893,432	2,106,563
DISPONIBLE								

*) JUNIO-DIC 1994 Y ENERO-JUNIO 1994.

**) PRESUPUESTO-REAL

FUENTE: ESTADOS DE RENDICION DE CUENTAS DEL PROYECTO

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CUADRO 2
PROYECTO DE RECURSOS FORESTALES PARA UN MEDIO AMBIENTE ESTABLE:
FONDOS LOCALES APLICADOS AL PROYECTO FUNDECOR
DEL 3 DE JUNIO DE 1991 AL 31 DE DICIEMBRE DE 1993

	Presupuesto		Real	
	En miles de Colones	Equivalente en Dólares	Equivalente US. Dólares	En miles de Colones
INGRESOS:				
Donaciones	1,200,000	9,775,967	408,024	50,085
Intereses			95,390	11,709
Total ingresos	1,200,000	9,775,967	503,414	61,794
DESEMBOLSOS:				
I. Actividades Globales	219,079	1,784,757	360,995	44,313
II. Actividades Especificas				
A. Administración de Areas Protegidas	37,175	302,851	25,443	3,123
B. Administración de Bosques Naturales	78,000	635,438		
C. Reforestación y Agrofo- restación	32,448	264,342		
D. Apoyo a Personal Técnico	15,927	129,752		
III. Evaluaciones y Auditorías			1,711	210
IV. Inflación y Contingencias	7,371	60,049		
V. Fondo Patrimonial	810,000	6,598,778		
Total Desembolsos	1,200,000	9,775,967	388,149	47,646
Fondos disponibles del proyecto	0	0	115,265	14,148

Puede apreciarse en la columna de balance, que a nivel de cada uno de los cuatro componentes del proyecto, ya existen desbalances importantes y el caso del componente "Manejo del Bosque Natural", lo gastado supera lo asignado por presupuesto; que son muy pocos los recursos disponibles para el componente de Areas Protegidas y en el caso de "Apoyo a Personal Técnico". Además, que la partida para el componente de Actividades Globales tiene disponible más allá inclusive que lo acumulado hasta junio de este año.

También se puede apreciar que el monto total disponible alcanza para más de un año de operaciones del proyecto, a los niveles actuales de gasto.

Evidentemente que para el funcionamiento del proyecto en el año siguiente, será necesario una reasignación de partidas presupuestarias a fin de que la estructura financiera del mismo sea concordante con los objetivos y metas sectoriales.

1.3. Sostenibilidad del Proyecto FORESTA y de FUNDECOR

Para evaluar la autosostenibilidad del proyecto, más allá de la finalización de la primera etapa financiada con fondos de la USAID, deben tomarse en cuenta los elementos que definirán

hacia futuro los gastos recurrentes para cada uno de los cuatro componentes del proyecto, así como los ingresos del proyecto, los cuales procederán de dos fuentes: a) los resultantes de los rendimientos del fondo patrimonial y la que se deriva de las recuperaciones y b) las rentas propias de los componentes, en los que se ha contemplado que habrá algún tipo de retorno de la inversión realizada.

En algunos casos, se tiene claro que las metas del proyecto se habrán cumplido a la finalización de la primera etapa y que la participación de FUNDECOR será únicamente de seguimiento y asistencia para que se cumplan las condiciones que harán estos renglones autosostenibles. Por tanto, no se espera que los gastos derivados de la actividad original del proyecto sigan con cargo a éste, sino mas bien a los ingresos generados por el mismo proyecto.

Un aspecto central en la metodología de desarrollo del proyecto FORESTA es que se ha pretendido la incorporación de los mecanismos y alicientes del mercado, a fin de asegurar la automatización en el funcionamiento del proyecto y en la participación de los agentes. Una parte significativa de los gastos se ejecuta a costos competitivos. Así mismo, se han

introducido elementos contractuales a fin de garantizar la recuperación de lo invertido en las fincas de los agricultores que se incorporan al programa.

Si bien los beneficios derivados de la venta son propiedad de los agricultores, hay otros beneficios extraordinarios derivados de los incentivos a la reforestación que los agricultores ceden para el pago por los servicios recibidos de FUNDECOR.

En el caso del componente de Reforestación y Agroforestación, la meta se ha fijado en promover entre los finqueros de la zona actividades de reforestación a una tasa de 400 hectáreas por año, donde la mitad de las mismas se hace con pequeños finqueros asociados a los centros Agrícolas Cantonales de la zona. Esta actividad es de poco costo pero de gran impacto y sin costo alguno para el agricultor.

Las otras doscientas hectáreas anuales se promocionan entre los finqueros medianos y grandes a un costo mayor para FUNDECOR que debe promover el proyecto, formularlo y supervisar su ejecución, asumiendo los gastos.

El agricultor se queda con los ingresos por la venta de la cosecha pero a cambio de este servicio, debe entregar los incentivos fiscales denominados Certificados de abono Forestal (CAF). Este CAF otorga un beneficio de ¢120.000 por hectárea más un 10% por gastos de capital. En términos netos descontados, se trata de una recuperación del 90% de los gastos en que ha incurrido FUNDECOR. Esta situación está basada en una expectativa razonable, en virtud de que no se dispone de cifras relativas al ciclo completo de los cinco años y solo han pasado dos de desarrollo del programa.

En el caso del manejo del bosque natural, se tiene que es el programa de mayor impacto debido a que es el que más contribuye a la misión de FUNDECOR. Como meta para los próximos años se espera que alcance la madurez enlistando 5000 hectáreas por año (actualmente se tienen enlistadas 13.000 según los funcionarios de FUNDECOR); desarrollando planes de manejo para 2000 hectáreas y cosechando 1000 hectáreas por año.

Los contratos con los propietarios de fincas contemplan un pago de ¢40.000 por hectárea a efectuar en tractos durante un periodo de cinco años, ya sea con el producto de la venta de

la madera o bien, con el 50% del valor del CAF.

Este programa resultará superavitario una vez que se normalicen los flujos de recuperaciones.

En lo que se refiere al componente de Administración de áreas protegidas, la directriz de FUNDECOR es que hasta 1996, de los gastos de administración un cincuenta por ciento corresponderá se dedicará a este componente del proyecto. FUNDECOR tiene la concesiones para la prestación de servicios a turistas en los parques nacionales, las cuales entregará en sub-concesiones a las municipalidades de la zona. A juicio de los actuales directores de FUNDECOR, se esperan entre \$100.000 y \$200.000 por concepto de concesiones las cuales entrarán a formar parte de un fideicomiso que se dedicará al beneficio de tales áreas con la influencia de FUNDECOR. Estos recursos, mas los derivados de las nuevas tarifas que se empezarán a cobrar en los parques terminarán por asegurar la autosuficiencia financiera.

Finalmente, en lo que respecta a los cuatro componentes del proyecto queda aclarar la situación del componente de operaciones globales. En los últimos dos años, este

componente en promedio representa \$450.000 de gasto por año. A la fecha, existen fondos suficientes para terminar el periodo correspondiente a la primera etapa del proyecto. En lo sucesivo se tiene previsto que estos gastos sean cubiertos con el Fondo Patrimonial, para el cual el Gobierno ya ha hecho los aportes correspondientes a fin de que a inicios de 1996 adquiera un valor de \$10,0 millones de 1995.

Actualmente, dichos fondos se encuentran en custodia en el Banco COFISA. De acuerdo a los rendimientos de los valores de la cartera que lo conforma, este fondo tendrá un valor de ¢ 1.501.5 millones en enero de 1995 con una tasa de rendimiento promedio anual del 25% neto.

La pregunta a responder respecto de esta situación es: Está el Fondo Patrimonial en disposición de cubrir los gastos generales más allá de la primera etapa del proyecto FORESTA con el producto de los rendimientos de este fondo, sin erosionarse con el tiempo?. Para responder esta pregunta se procedió a revisar las proyecciones realizadas por el Consultor de AID encargado del proyecto y las efectuadas por la misma administración de FUNDECOR, en respuesta a las primeras.

Ambos ejercicios de proyección contemplan supuestos de proyección relacionados con niveles de inflación doméstica y de los Estados Unidos; tasas de devaluación de la moneda costarricense y tasas pasivas de interés como tasa de rendimiento. Ambos hacen los cálculos mensuales de gasto de FUNDECOR y sobre los rendimientos de las inversiones, en el entendido que, como los gastos se desembolsan mensualmente, es posible realizar capitalizaciones de los intereses mensualmente.

Tratándose de proyecciones de largo plazo donde los aspectos condicionantes pueden ser de gran variabilidad si se consideran separadamente, no puede juzgarse a este nivel de detalle las proyecciones sin caer en un cuestionamiento de los supuestos mediante los cuales se lleva a cabo la proyección.

Como lo importante es determinar con alguna razonabilidad si la corriente de ingresos proveniente de los rendimientos del fondo patrimonial son suficientes para mantener las operaciones globales de FUNDECOR, se consideró más apropiado utilizar un sistema más simple de proyección sobre la base de cálculos anuales y no mensuales, abstrayendo los beneficios

adicionales resultantes de la capitalización mensual de intereses y tomando como base los siguientes elementos de proyección:

a) Las expectativas recientes de inflación para Costa Rica, se sitúan en el orden del 17-18%, a pesar de que la meta se ha instituido en 12% para el presente año. Esta situación en el largo plazo podría resultar en un promedio del 15% anual, como ha sucedido en los últimos diez años, producto del devenir de gobiernos alternándose el poder;

b) La inflación en la economía norteamericana, según estimaciones de Paul Volckan, del Federal Reserve, publicadas recientemente en "The Economist", así como en otro artículo menos reciente de la publicación del Federal Reserve de Atlanta. Y otro artículo contemporáneo publicado en "Economics perspectives", prevén una inflación del 3.5% en promedio con un horizonte hacia finales de siglo.

c) el nivel de devaluación del colón en el largo plazo se ajusta a las diferencias de inflación entre la costarricense y norteamericana. Los niveles anuales previstos en el largo plazo son del orden del 12% anual.

d) la tasa básica pasiva a nivel nacional está por el orden del 23,5% anual y la tasa Libor por el orden del 5,25% anual a seis meses.

e) en las condiciones actuales como las que tiene FUNDECOR, donde se tiene exoneración del impuesto sobre títulos valores y en inversiones a largo plazo, los rendimientos actuales están entre tres y cuatro puntos porcentuales sobre la tasa básica pasiva; esto es por el orden del 26.5 y 27,5%. (Esto es válido para las inversiones de los sistemas de pensiones complementarias en el mercado costarricense)

Estos elementos conducen al planteamiento de al menos dos escenarios para la obtención de una tasa real de interés, que aplicada a los valores del fondo patrimonial, proporcionaría los flujos de recursos en colones de 1995. O bien, su equivalente en US\$, también fijado en términos constantes de ese mismo año, para efectos de comparación con los requerimientos: Rendimientos reales entre 8,5% y 9,5%.

Hay que hacer notar que en el ambiente nacional, existe una esperanza especialmente en el círculo de los economistas, de que las tasas reales de interés se reducirán

significativamente en el largo plazo como consecuencia de la reforma estructural que se ha planteado en el sector financiero. La apreciación del que escribe este informe es que, a un plazo no mayor de cinco años, no es posible esperar cambios significativos en esta situación, especialmente por la orientación ideológica del gobierno de turno se deben esperar ajustes menos drásticos en dicho sector y porque la experiencia de los últimos diez años, con elementos más a favor de esta tesis, ha resultado en una condición similar a la de ahora en cuanto a los rendimientos a largo plazo.

Si el Fondo Patrimonial tendrá un nivel de \$10,0 millones de 1995 a comienzos de 1996, como se desprende de los cálculos sobre rendimientos sobre la base de los cupones, entonces producirá rendimientos brutos mínimos de \$850 mil anuales en términos constantes de 1995 (8,5% anual en términos reales).

A estos ingresos brutos deberán deducirse los costos de administración bajo el esquema de administración compartida que se derivan de las actuales negociaciones que involucran un Fiduciario y un comité técnico de seguimiento de la misión de FUNDECOR, con un costo aproximado al 1% (\$100.000).

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Si los costos del componente Operaciones Globales a financiar suman en su monto básico \$450.000 y los costos de reposición de activos suman aproximadamente \$30.000, puede concluirse que dichos rendimientos del Fondo patrimonial, son suficientes para cubrir los gastos de operación, mantener el poder adquisitivo de dicho fondo y cubrir los saldos al descubierto en el componente deficitario de reforestación.

Este cálculo de \$30.000/año en cuanto a reposición de equipo se justifica de la siguiente forma:

i. Vehículos	\$12.000
ii. Equipo de cómputo	10.000
iii. Software	3.000
vi. Equipo de Radiocom.	3.000
v. Otro equipo de oficina	2.000
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Total	3.000

II. ANALISIS DE LA SITUACION DE LA ADMINISTRACION FINANCIERA DE FUNDECOR

En la presente sección interesa describir los procesos mediante los cuales se canalizan los recursos del Proyecto FORESTA a través de FUNDECOR. Para tal efecto, se toman en consideración tres aspectos básicos: a) los instrumentos de planificación financiera y el control; b) los relacionados con la programación financiera de la empresa y c) los relacionados con la administración financiera propiamente dicha.

2.1. Los mecanismos de planificación financiera y del control.

Como todo proyecto financiado con fondos de AID, antes de iniciar se le hace un estudio previo a la organización que se encargará de su ejecución "PRE AWARD SURVY", donde se evalúan los elementos críticos en materia contable, administrativa y de control interno.

Este estudio pretende determinar hasta qué punto la institución está preparada para llevar a cabo la ejecución del proyecto y de ser necesario, hacer las recomendaciones

del caso para su corrección. En el caso de FUNDECOR, esta evaluación la hizo la Empresa Price-Waterhouse (PW), y en acto seguido procedió la elaboración de cinco manuales de procedimientos que guiarían el desarrollo y desempeño de la institución con el proyecto.

Dichos manuales fueron entregados a la junta directiva de FUNDECOR, la que como es costumbre, los aceptó comprometiéndose a emplearlos en el desarrollo del proyecto. En virtud de la importancia y novedad del proyecto, como parte de las precauciones que garantizaran su futuro buen desempeño, paralelo a los acuerdos de ejecución, se firmó un contrato con la misma empresa PW para que asesorara a la fundación en la puesta en marcha de los sistemas diseñados.

Los sistemas estaban más allá de los requerimientos generales que tiene AID para la administración de sus proyectos, pero ajustados en lo referente a la materia contable.

En cuanto a los reportes sobre desempeño, el proyecto quedó sometido a los controles de auditoría señalados por el Regional Inspector General (RIG) y a los procedimientos para la administración financiera señalados por la sección de

análisis financiero de la Misión, bajo las disposiciones contenidas en el Handbook 3 y en el Handbook 13.

Dentro de este marco general de control se llevaron a cabo las auditorías desde la conclusión de los primeros seis meses de desarrollo del proyecto.

La situación durante los primeros años del proyecto, en muy poco tiene que ver con una verdadera planificación financiera, por cuanto la mayoría de las actividades en este ámbito quedan reducidas a la ejecución presupuestaria.

En la elaboración de los primeros reportes a la AID se determinó que los sistemas contables desarrollados por PW, así como el cuadro de cuentas correspondiente, no se ajustaban a los requerimientos de AID.

En vista de lo anterior, se hizo un planteamiento a la AID para que en virtud de que FUNDECOR es autónoma y procuraría la autosuficiencia financiera, debiera ser eximido de seguir los procedimientos señalados por AID, asunto que fue finalmente aceptado por la institución.

En diciembre de 1992 se llevan a cabo reversiones de partidas necesarias para la introducción de las indicaciones de PW.

Esto justificó grandes ajustes y las cifras en rojo que aparecen en el informe contable de 1992.

A pesar de lo anterior, la introducción del nuevo sistema permitió mejorar la situación pero los reportes mensuales a la AID se seguían preparando en forma manual. Esto hacía que la información base se digitara varias veces para la elaboración de los informes contables y los reportes a la Agencia, aspecto que motivó el desarrollo de un software para integrar en un solo proceso, la digitación de la información a fin de que esta sirviera para todos los propósitos de la fundación en materia de informes.

La integración como se puede verificar de los elementos en un solo sistema de información permite el aprovechamiento de la información que se deriva del esfuerzo realizado para contar con más detalle del requerido por AID, pero esencial para un seguimiento programático. Este sistema integra la programación operativa con el presupuesto y con la contabilidad.

Entre octubre de 1993 y enero de 1994 se estableció un sistema de control presupuestario aprovechando la información

que se digitó en el nuevo sistema contable administrativo.

Este sistema obligó a una modificación del sistema contable introduciendo niveles de detalle y un esquema más amplio de participación de los responsables de la administración de recursos en la institución.

Esta mayor participación se aprecia incluso siguiendo los los cambios que se dieron en el proceso de elaboración presupuestaria, que para el último año se ha desarrollado hasta nivel de meta, con mejores conocimientos del detalle de los costos históricos y sobre la base de actividades a desarrollar para su logro.

Para la elaboración del presupuesto se parte del plan estratégico general de FUNDECOR. Se elaboran simultáneamente presupuesto y plan operativo. Con la elaboración del plan operativo, los encargados de Area se ven obligados a justificar cada componente del plan y los recursos que consumirán cada una de esas actividades para alcanzar una determinada meta.

En materia de control, los instrumentos utilizados se derivan de los procedimientos señalados básicamente por la AID. Para este control, en la AID recibe los dictámenes de auditoría externa que siguen los señalamientos del RIG, que partiendo del estado de rendición de cuentas del que se pueden derivar los orígenes y destino de los fondos.

Estos informes contienen los denominados hallazgos, donde se indican las deficiencias en los procedimientos de registro o bien en cuanto a desviaciones respecto del manejo del control interno en la asignación de recursos.

Pese a la opinión favorable que tienen en la misma Misión de la AID, sobre el nivel de desempeño de la Administración, siempre es posible encontrar algunas deficiencias en el registro o bien, lo que se ha denominado "desviaciones menores en los procedimientos de compras y de contrataciones".

No puede decirse que existan desviaciones que puedan considerarse de trascendencia en el desarrollo del proyecto, ni omisiones importantes en los procedimientos de registro contable. Los auditores han señalado para el año 1991, la

ausencia de política de depreciaciones de activos fijos y la falta de conversión contable de los colones a US\$.

En 1992 los aspectos destacables están por el lado de las desviaciones menores de los procesos de compras y contrataciones; ligero incumplimiento por no erogación de sumas presupuestadas; erogación de fondos para partidas sin contenido presupuestario y el no reporte de los gastos de zonaje a la Caja Costarricense de Seguro Social.

En 1993 se dan incumplimientos de firmas para solicitar desembolsos y violaciones a las proporciones de inversión previstas en el contrato de Fideicomiso; desembolsos no presupuestados para cubrir gastos de la administración. Además, no se obtuvo el visto bueno del MIRENEM. En cuanto al fideicomiso 18-91 contratado con BANCOOP, se dieron incumplimientos de firmas en desembolsos y gastos no presupuestados; y finalmente, no se contaba con auxiliares de registro sobre intereses por cobrar. Todos estos detalles fueron explicitados por la auditoría externa en su oportunidad y se procedió a su corrección por parte de la administración, verificándose la misma en la auditoría del año siguiente.

Otros aspectos vinculados a la estructura del control interno son: una inadecuada valuación de las cuentas no recuperables y nuevamente faltantes de firmas de autorización.

En General, FUNDECOR ha aceptado de inmediato las recomendaciones hechas por la auditoría externa para mejorar el sistema de registro contable y de control interno, las ha incorporado en los periodos siguientes, no quedando pendientes. Se puede decir que se trata de faltas menores y comunes en los sistemas que de ninguna manera restan méritos refiriéndose a la razonabilidad expresada por los auditores en cuanto a las operaciones de FUNDECOR.

2.2. La programación financiera.

La finalidad de FUNDECOR es convertirse a finales de 1995 en una institución permanente y autosostenible. Para ello, ha iniciado desde el año 1992 un proceso de revisión permanente de los sistemas de planificación financiera vinculados al plan estratégico y los planes operativos de la institución, así como al sistema contable.

Más que para prever problemas, los sistemas se han estado desarrollando con la finalidad de aprovechar oportunidades derivadas del mayor conocimiento sobre el desempeño en cada componente del proyecto. Lo bueno de esto es que permite a la institución contar con elementos de juicio para evaluar los esfuerzos que se hacen para alcanzar cada una de las metas y promover una mejor asignación de los recursos.

Como se dijo anteriormente, el nuevo sistema de información permite alimentar un proceso de interacción entre el personal para integrar los elementos de planificación financiera con los planes estratégicos y los planes operativos de FUNDECOR.

Si bien se reconoce el avance logrado hasta ahora en la integración de estos tres elementos, aspecto que ha redundado en un mayor nivel de claridad y de detalle en beneficio de un mejor control de los gastos y actividades del proyecto, la tarea de separar los costos del mismo en su componente fijo y variable es tan solo una idea que se tiene en mente empezar su implementación hacia 1995.

La importancia de esta separación es que se trata de un paso más allá para un control adecuado de los costos de operación.

2.3. La administración financiera

Dos son los elementos a considerar en esta sección: a) el primero se refiere a lo adecuado de las líneas de responsabilidad entre la administración, la contabilidad y la administración financiera de la empresa; y b) lo adecuado de la administración de fondos de las actividades de FUNDECOR.

a) Líneas de responsabilidad.

Solo se pueden hacer aquellos gastos contemplados en las actividades el plan anual operativo (PAO). El responsable del área o componente del proyecto hace la solicitud de compra de bienes o servicios al Departamento de Servicios Generales y este último se dedica a la obtención de ofertas. El Departamento de Servicios Generales evalúa y recomienda; luego si la compra no excede a los ¢250.000, la Dirección Administrativa elige. Cuando se trata de compras entre ¢250.000 y ¢500.000, la aprobación debe hacerse a nivel de Dirección Ejecutiva. Cuando se trata de compras entre ¢500.000 y un millón de colones, se siguen procedimientos similares a la licitación privada pero mucho más expeditos. Aquí la decisión se toma en un comité Ad Hoc. Cuando la

compra supera el millón de colones, los procedimientos se asemejan más al proceso de licitación pública, pero mucho más ágiles. En estos casos, un miembro de la Junta se integra a la comisión Ad-Hoc.

Una vez que se ha procedido a informar de la adjudicación y se ha recibido la mercancía con la factura de cobro en el Departamento de Contabilidad, se procede al trámite de cheque. La persona encargada de la aprobación en cada caso deberá firmar una orden de emisión de cheque. La firma del cheque se hace en forma mancomunada en donde, en todos los casos debe participar el Director Ejecutivo, acompañado de la instancia que adjudicó, sea este el Director Administrativo, o bien acompañado del miembro de junta, cuando la compra excede el millón de colones.

En todos los casos, las solicitudes de confección de cheques van acompañadas desde la contabilidad por un estado de fondos.

En ausencia del Director Ejecutivo, su papel es desempeñado por un miembro de la Junta.

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b) Lo adecuado de la administración de fondos de las actividades de FUNDECOR

En este último aparte, es importante destacar las actividades realizadas por la Dirección Ejecutiva de FUNDECOR para resolver el problema del congelamiento de los fondos de la contrapartida del Gobierno. Esto como un indicador de trabajo en equipo de la Administración, la Junta y la misma USAID.

De los \$1200 millones originalmente presupuestados, en 1992 se logró obtener un paquete de Bonos de Estabilización Monetaria (BEM) junto con la posibilidad de que ganaran intereses, aspecto que sirvió para recuperar el terreno perdido por el retraso en el desembolso de esta partida.

Lo trascendente de esta tarea es que se llevó a cabo en una situación difícil y de austeridad marcada por la política contractiva del medio circulante. Como indicador de eficiencia puede decirse que fue el único caso que se ejecutó en tales circunstancias, ya que otros compromisos en condiciones similares no salieron.

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Esta actividad, aunque consumió mucho tiempo de la Administración vino a representar un logro de mucha trascendencia para el proyecto mismo.

En aspectos menores, la opinión generalizadamente recibida de todos los entrevistados, refleja que la tarea desarrollada por PW, acompañada de una buena administración, hacen que el proyecto FORESTA y en particular la institución FUNDECOR, cuenta con altos niveles de calificación que han incidido en un buen desempeño y en hacer muy probable la sostenibilidad del mismo desde el punto de vista financiero.

III. CONSIDERACIONES FINALES

A manera de síntesis de lo expuesto, se expresan aquí algunos comentarios finales referentes a cada uno de los aspectos objeto del presente trabajo:

3.1. La corta vida del proyecto, así como los cambios profundos introducidos a raíz de la no disposición oportuna del aporte estatal; así como las modificaciones metodológicas sobre la implementación del proyecto, no hacen posible realizar análisis histórico válido ni de tendencias de largo

plazo. No obstante, los aspectos más importantes respecto de la supervivencia del programa, así como sobre los requerimientos de recursos más allá de la primera etapa, son analizados en la sección de sostenibilidad.

3.2. El monto inicial de recursos asignado al proyecto fue de \$22.5 millones, de los cuales se esperaba que el Gobierno de Costa Rica aportara el equivalente de \$15.0 Millones (un 33% para apoyar las operaciones durante FORESTA I y el 66% restante para la constitución de un Fondo patrimonial para financiar FORESTA II). Dificultades más allá del propio ámbito del proyecto hicieron que el aporte estatal no estuviera definido sino hasta 1992 en forma de Bonos de Estabilización Monetaria, y solo en un 80% de lo originalmente acordado. Por tanto, se redefinió el destino de estos fondos para engrosar exclusivamente el Fondo Patrimonial, a fin de que con los rendimientos en el mercado financiero, en 1996 alcanzara el monto de \$10.0 Millones.

Por otra parte, los \$7.5 millones del aporte de la USAID también fueron dispuestos en forma diferente a lo establecido en el "Project Paper", de manera que en el convenio, un 33% de ese monto, se sacaron de la injerencia de FUNDECOR para

ser administrados por la USAID CR para financiar actividades de asistencia técnica, evaluaciones, contingencias y para el pago del encargado de proyecto por parte de USAID. El resultado de todo esto fue una fuerte reasignación de recursos y recortes presupuestarios, donde las actividades más afectadas fueron las relacionadas con el componente de Agroforestación y reforestación.

Por otra parte, los recursos actualmente disponibles para FORESTA I son apenas suficientes para concluir esta etapa al ritmo de trabajo actual. Si se quisiera una aceleración del ritmo de las operaciones, será necesario una inyección adicional con cargo a los recursos sobrantes en el presupuesto que administra la USAID.

3.3. Una fortaleza del proyecto FORESTA es la introducción de una metodología con una adecuada combinación de los mecanismos de mercado y de sostenibilidad, de manera que representen un verdadero incentivo para el agricultor y organizaciones de la zona involucradas en los proyectos.

Este enfoque ha inspirado la mayor parte de las actividades del proyecto y por ende, se espera que en una buena parte de

los componentes del proyecto, generarán sus propios recursos a partir de 1996.

En lo que respecta a las Actividades Globales, desde el inicio del proyecto se dispuso que éstas serían financiadas con los rendimientos del Fondo Patrimonial. Las proyecciones financieras de los rendimientos de este fondo permiten concluir que se generarán los recursos suficientes para mantener los niveles de gasto de este componente y abonar a los otros que presentarán déficit.

En términos generales, se esperan rendimientos anuales no menores de \$700.000, los cuales pueden distribuirse como sigue:

- Actividades globales	\$ 450.000
- Reposición de activos	30.000
- Costo administrativo para asegurar el cumplimiento de la misión de FUNDECOR	100.000
- Apoyo a otros componentes	120.000
<hr/>	
Total	700.000

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3.4. La planificación financiera de FUNDECOR es relativamente simple. Un buen sistema desarrollado por PW, aparejado a un cuerpo administrativo bien calificado, hacen que se haya cumplido con holgura con los requerimientos del la USAID.

Puede decirse que la evolución de los sistemas de información y de los sistemas integrados de planificación financiera, planificación estratégica y operativa, van orientados al logro del objetivo de FUNDECOR como institución sana y permanente.

3.5. Con la finalidad de avanzar hacia la organización de FUNDECOR como institución permanente, se realizaron importantes transformaciones en los sistemas de reporte a la USAID, pasando de una contabilidad sobre la base de efectivo como la exigida por la USAID a una sobre la base de acumulados, bajo de concepto de sistema de información que integra la programación operativa, el presupuesto y la contabilidad. FUNDECOR ha avanzado significativamente en esta dirección y en el primer semestre de este año ya cuenta con los esquemas de control presupuestario y de programación financiera, a nivel de metas por componente del proyecto.

3.6. Se pudo observar que existe en FUNDECOR un adecuado control sobre el uso y destino de los recursos, no solo por la evaluación del sistema de información descrito anteriormente, sino por la valoración de los procedimientos seguidos para la realización de los pagos que asigna responsabilidades a diferente nivel, según monto y frecuencia de los gastos. Adicionalmente, puede decirse que los resultados de las auditorías externas muestra como saldo un buen desempeño y una mejora constante en lo referente a los procedimientos contables y de control interno.

ANNEX G

A GUIDE TO THE PROCESS OF PARTICIPATORY RESEARCH



A Guide to the Process of Participatory Research

Examining the Role of Gender in Sustainable Natural Resource Management

A basic strategy of the United States Agency for International Development (USAID) is to promote sustainable development through the full participation, involvement, and empowerment of local peoples, both women and men. In keeping with this strategy, two projects with USAID funding, "Ecology, Community Organization and Gender" (ECOGEN) and DESFIL (see box, page 9), use participatory methods, including gender analysis, in conducting research in communities where they work.

By using participatory methodologies, researchers engage community members in the research process. Local men and women act as informants, as advisors, and as guides. They therefore both contribute to and learn from the research process. Finally, the products of the research are returned to the communities for their review and use.

This guide represents a collaboration between ECOGEN and DESFIL. It outlines some of the *steps* and *lessons learned* in participatory research in examining the role of gender in the sustainable management of fragile lands. The lessons learned are illustrated by *examples* from an ECOGEN case study conducted in Southern Honduras.¹ This guide is designed for those interested in participatory research as an aid in formulating research projects or as a training tool (see Training Notes, next page).

DESFIL promotes the participation of local resource users in the sustainable management of fragile lands. The multidisciplinary team, experienced in linking natural resources management and sustainable agriculture with the social sciences, includes: Bruce Ross, senior program manager and geographer; William Fiebig, agronomist; Elizabeth Adelski, anthropologist; Ismael Ouedraogo, economist; and Mary Hill Rojas, gender specialist, who wrote this issue of DESFIL REPORTS with Annie-Marie Urban, Latin American Caribbean advisor for USAID's Office of Women in Development, formerly with the ECOGEN Project. Comments are welcome.

THE RESEARCH PROCESS: PREPARATION

Step One: Formulating a Research Framework

A conceptual framework and working questions guide the research.

The central assumption for both the DESFIL and the ECOGEN conceptual frameworks is that development and the research that supports it begin with local resource users, both men and women. The ECOGEN approach, which guided the research in Southern Honduras, builds on recent research that has expanded the analysis of poverty, powerlessness, and environmental degradation to focus on gender differences in accessing and using natural resources. Its gender-focused, land-user approach emphasizes multiple uses and users of natural resources, recognition of indigenous knowledge, and treatment of rural people as research partners. The approach also includes analysis of the social, political, and economic institutions that influence the lives of the communities under study.²

Based on the ECOGEN framework and an extensive literature review, the goal of the study in Southern

TRAINING NOTES

This guide to participatory research has two sections: a) *Research Preparation* and b) *Research Implementation*. When using the guide for training it is recommended that at least one session be devoted to each section. Ideally, a third session should be held to field test and practice the participatory research tools suggested under *Research Implementation, Step Two: Working in the Field*. The goal of the training sessions is for the participants to learn to draft their own research plans.

It is suggested that training proceed as follows: 1) The trainer presents each step of the guide, and the example illustrating it. 2) Participants, working in small groups, begin to formulate their own research plans. For example, the trainer presents *Research Preparation, Step One: Formulating a Research Framework*, by considering the conceptual framework and the research questions from Southern Honduras. Then, in small groups, the participants begin to formulate their own conceptual framework and questions based on their projected research. Or, in the section on *Research Implementation, Step One: Team Building*, the trainer reviews the importance of team building, again using the example provided. Then the small groups draft an agenda for the team building and orientation of their own research.

Honduras was to examine the links between gender, natural resource management, and sustainable development in four rural communities. The research questions were:

- 1) What are the roles, responsibilities, and rights of rural men and women with respect to natural resource management?
- 2) What strategies do rural men and women use to cope with environmental degradation and poverty, and how do these strategies affect gender relations within households and communities?
- 3) What are the policy implications of the research findings for community groups, nongovernmental organizations working in the region, the government, and the donor community?

Step Two: Partnerships, Place, and Personnel

Partnerships: *The choice of research partners depends on the goals and priorities of the researchers, those funding the research, and those working with the communities.*

In 1993—with the support of the USAID Office of Women in Development, the Ministry of Natural Resources of the Government of Honduras, and USAID Honduras—ECOGEN personnel designed

a study to better understand the links between gender, natural resource management, and sustainable development in Southern Honduras. The Land Use and Productivity Enhancement Project (LUPE), ECOGEN's host in Honduras and USAID's principal project under the Honduran Ministry of Natural Resources, addressed rural productivity and natural resource management activities on the hillsides of Central and Southern Honduras. With an interest in enhancing its understanding of and attention to gender issues, LUPE was a natural partner for the research effort.

An initial planning trip to Honduras by the ECOGEN director established contacts with communities, extension agents, and government personnel. Based on these contacts, a research site was selected in Southern Honduras in the municipality of Choluteca where LUPE's extension personnel had direct ties with the communities. These ties facilitated introductions of the researchers to community members and the dissemination of information about the research project.

Place: *The rationale for the choice of the research site should reflect the research goals.*

The research study was conducted in a region where the Linaca Extension Agency, one of the LUPE-supported rural agencies in the Department of Choluteca, works with several community groups. The region was chosen primarily because of the importa

mental crisis in the uplands of Southern Honduras and ECOGEN's mandate to explore local efforts to manage natural resources. The region was also chosen because of its relative isolation from the capital, limited access to governmental and nongovernmental services, and the lack of attention it had received in previous research on Southern Honduras.³ In addition, Linaca Agency staff recently had completed a diagnostic study of the region and were enthusiastic about the opportunity to deepen and share their knowledge of the communities in which they worked.

At the time of the study, LUPE was working with eight Linaca communities. Four of them—La Picota, Agua Caliente, El Zapote, and Cerro Verde—were chosen for the study. The primary considerations for their selection were: a) population size—each community had more than 50 households; b) geographic location—at least one community was chosen from each of the region's three agroecological zones. In addition, the communities chosen included some which were close to the city of Choluteca and others which were more isolated.

Personnel: A multidisciplinary research team, with members both native to the area and from outside, allows for cross-disciplinary and cross-cultural insights.

Four researchers, all women, carried out the study. The team leader was a specialist in rural development and gender analysis from the United States. The other three researchers, all from Honduras, consisted of a biologist and two social workers. All four spoke Spanish and had experience working with rural people. One researcher was from Choluteca itself and guided the rest of the team through the cultural nuances of the area. A fifth team member, a sociologist and gender specialist from the United States, helped establish the project in the field and acted as an advisor during the initial field work.

The composition of the team allowed for cross-disciplinary insights by combining the social sciences and the technical sciences. For example, the biologist identified and documented medicinal plants, while other team members worked with individuals of the community to identify the plants' local uses and availability. At other times the social workers,

trained in working with community groups, led group discussions while the other team members kept the focus of the discussion on natural resources and gender roles.

The single-sex team was considered appropriate because of the research focus on women and gender. Nevertheless, the team might have benefited from the perspective of a male team member, especially for the work with the village men, many of whom served as guides, informants, and advisors.

THE RESEARCH PROCESS: IMPLEMENTATION

Step One: Team Building

Continual team building among the researchers is a priority.

The five researchers met in Tegucigalpa for three days of orientation and training. The objectives of this initial team building were to: a) get to know one another; b) plan research strategies; c) train in participatory research methodologies and gender analysis. Getting to know one another included sharing professional and personal information and spending time together outside work. Research planning centered on designing the household interview guide. This focus helped the team discuss the substance of the research, incorporate the ideas of all the members, and assure that the whole team felt ownership of the project. During the training the researchers used a case study to consider the concept of gender and to understand gender analysis. They also practiced field research methods by carrying out focus group discussions, field-testing the interview schedule, and conducting transect tours to develop community profiles.⁴

Team building continued in the field. Virtual strangers before the project, the researchers lived and worked together in Honduras, sleeping in hammocks in the villages and sharing hotel rooms in town. Living and working together provided them the opportunity to learn from each other and to incorporate their suggestions and criticisms into the research structure. Though it might have been useful for the team to have developed a formal system for conflict resolution during the orientation, an informal system initiated by the team leader in the field created a

collaborative environment that encouraged dialogue and conflict resolution. One conflict, for example, concerned the scope of work. The intense requirements of the research often demanded extraordinarily long hours. Job expectations should have been more carefully discussed at the team orientation.

Step Two: Working in the Field

Keeping gender at the center of the research agenda requires constant vigilance.

The orientation had emphasized gender and gender analysis, thereby establishing common definitions and language for the team. It also focused the research on socially defined gender roles and data disaggregated by sex. Nevertheless, the team had to be constantly vigilant in keeping the gender lens on the issues under study, whether it was on specific natural resource management techniques or issues of community organizational development. It was all too easy to slip away from gender, especially in discussions about natural resources. The lack of water in the village, for example, often became the focal point rather than the strategies used by men and women to cope with the drought.

A participatory research process requires tools that invite community participation.

Participatory research values local knowledge and the active participation of the community. This study therefore relied on meetings and research methodologies specifically designed to engage the community members in the research process.

Introductory Meetings: The Linaca extension staff organized the first meetings to introduce the research team to community leaders, both men and women, and to hold community-wide, introductory meetings and preliminary planning sessions with the community. At these meetings, the team members addressed questions and concerns about the research, solicited the support and participation of community members, and found hosts and guides as research aids. Particular attention was paid to soliciting the ideas and help of women as well as men.

The level of attendance and communication achieved at these meetings influenced the reception and accep-

tance of the research team on subsequent community stays. In one community, few community members attended the introductory meeting because of insufficient notice. Subsequently, the researchers spent a good amount of time during the first extended stays finding guides, hosts, and advisors and establishing credibility and trust.

Extended Community Stays: During the first extended stays of four days in each of the communities, the team members lived with local families, establishing rapport and exchanging information and insights on life and work. With the continual assistance and insights of the men, women, boys, and girls living in the communities, the team members gathered spatial, time-related, and social data.⁵

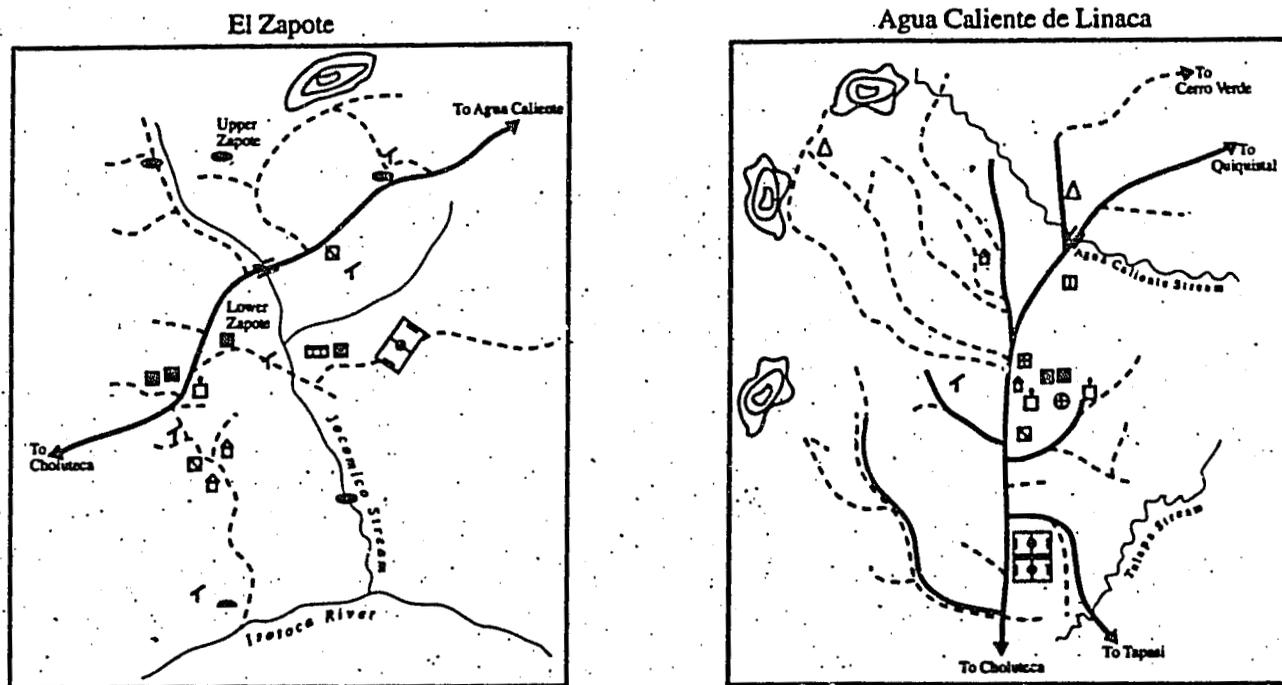
Spatial Data

The research team supplemented the available community maps with on-site surveying to develop current *sketch maps* of each community (see Figure 1). With the addition of the households, these maps enabled the team to draw a geographically stratified random sample for interviews.

To capture the diverse landscapes and resources of the communities and their people, the team collected more detailed spatial information at both the community and household levels. On a carefully planned walking tour transecting each community, the researchers and community guides noted the location and variety of cropping patterns, vegetation, water sources, socioeconomic status indicators such as housing types and domestic animals, and examples of natural resource management techniques. These *transects* resulted in the systematic development of profiles of each community's natural resources and their users, disaggregated by sex.

Each researcher, in collaboration with the men, women, and children of the communities, drew *farm and home sketches* of households from different socioeconomic backgrounds. The sketches indicated the variety of natural resource management strategies that were used by the households. The home sketches included the "solar," the area surrounding the house which is the primary domain of the woman and which often features a diverse collection of food and medicinal plants and tree species.

Figure 1: Sketch Map of Agua Caliente and El Zapote



- "Natural Well"
- ▤ Lavenderos (concrete washboards and sinks)
- ⊞ Soccer Field
- Schools

- ◐ Production of Tiles/Bricks
- ⊕ Water Pump
- ⊞ Church
- ⊞ Water Tank

- ⊞ Motorised Corn Grinder
- △ Wells
- ⊞ Public Health Center
- ⊞ Palperias
- ⊞ Feeding Center

- ~~~~~ River/Stream
- - - Footpath
- Road
- ⊕ Semi-Private Health Clinic
- ⊞ Production of Small Clay Utensils

Source: ECOGEN Field Data, 1992

Included with the sketch was a list of all the plants in each solar and their uses as the family identified them. *Gender mapping techniques*, or labeling the landscape in terms of men's and women's labor and their access to and control over resources, were incorporated into several sketches to visually represent the gendered space in each community.⁶

Time-Related Data

Community time-lines documented information about the unique historical development of each community. Two focus groups in each community, one with senior men and another with senior women, discussed community histories, emphasizing changes in the natural resource base and key community development initiatives. Men and women tended to emphasize different events in their community's natural

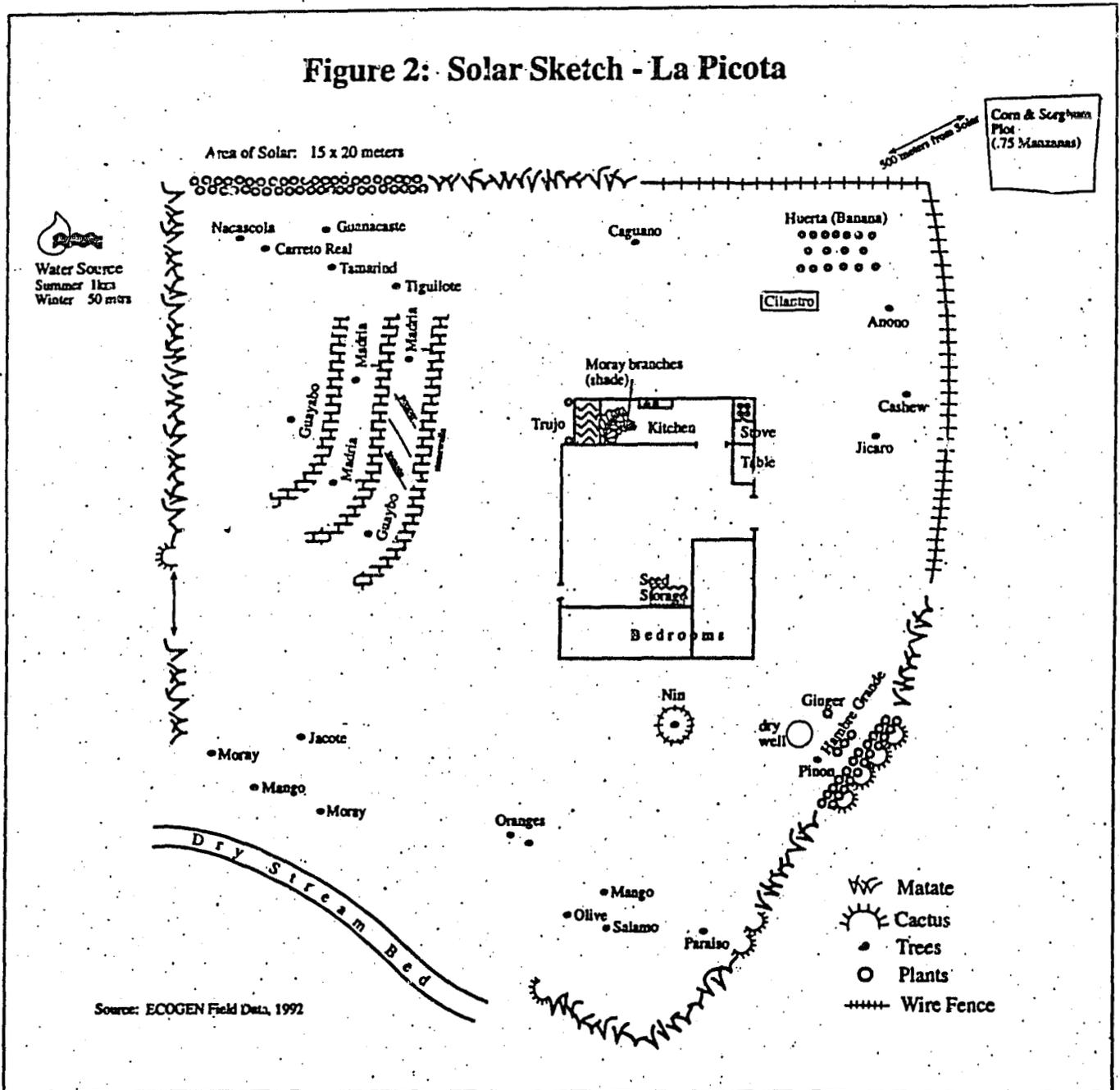
and social history. These accounts were supplemented and broadened by subsequent interviews with a sample of community households.

Other time-related data included gender disaggregated *seasonal activities calendars* (see Figure 3), noting the activities of men and women at different times during the year, and *schedules of a typical day* for both men and women. Both these tools helped clarify the roles, rights, and responsibilities of men and women with regard to natural resources.

Social Data

The team conducted *in-depth household interviews* with community members, using rapid rural appraisal techniques to identify key trends, concerns, and other issues related to natural resource manage-

Figure 2: Solar Sketch - La Picota



ment.⁷ The household interview guide developed during the team orientation provided an informal framework. Interview questions touched on diverse issues related to the systems of both production and social reproduction within the households and the communities. Key themes, disaggregated by sex, included daily activities, uses of, access to, and control over natural resources; elaboration of products both for sale and for home consumption made from natural resources; and involvement in community organizations. Care was taken to interview men and women separately whenever possible.⁸ Addi-

tional social and historical data about the community and the management of natural resources were gathered through:

- *Key informant interviews*: conversations with both men and women leaders such as teachers, health workers, and traditional healers.
- *Focus group discussions*, organized separately for women and men, which yielded gender-disaggregated seasonal activities calendars, an analysis of each community's institutional structure, and a

dures of local organizations.

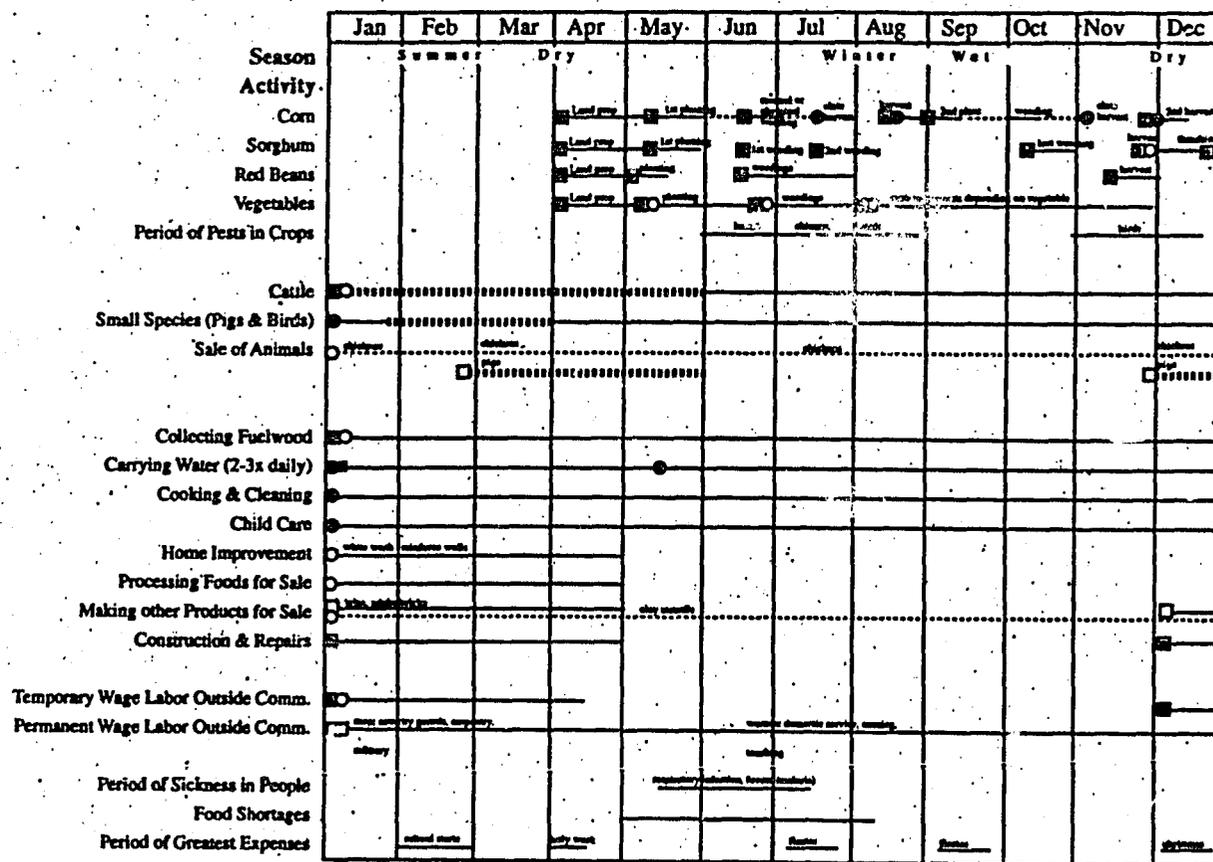
- *Participant observation*, which increased the understanding of the work loads and management skills of women (who often downplay their public and household roles and responsibilities).

Participant observation, for example, helped the team clarify and expand its definition of the farming system. A narrow definition, from planting to harvesting, emphasizes male activities, resulting in many agricultural projects that are directed toward men. However, through observation it was clear to the team that men, women, and children—separately and together—were involved in agricultural activities. The men and boys were responsible for preparing the land, planting, weeding, and harvesting. The women and girls also participated in these activities,

and were responsible for storage, shelling, grinding, and production of flour, tortillas, and other foods. The definition was expanded to describe the farming process from planting to tortilla, and in so doing included women and men, boys and girls.

Subsequent Community Stays: From the knowledge shared by community members in the first extended community stays, the research team constructed a *formal confirmation survey*, serving as the quantitative component of the research. The team returned to the communities for a second stay of four days with local females. Selecting a random sample of households from the community sketch maps, the team used the formal survey to validate previously observed phenomena about natural resources and their management, clarify inconsistent findings, and provide solid demographic data disaggregated by sex.

Figure 3: Gender Disaggregated Activities Calendar



Source: ECOGEN Field Data, 1992.

- Adult female
- Female youth/child
- Adult male
- Male youth/child
- continuous activity
- sporadic activity
- ===== heaviest activity

team focus group interviews to verify the seasonal activities calendars and to create institutional diagrams. Men and women were asked to rank the importance of community institutions as represented by various sizes of circles of paper and to show the relationships among them. The resulting diagram (see Figure 4) indicates that men and women ranked the relevance of institutions differently, often depending on gender-influenced priorities and involvements. Men, for example, gave the "patronato," the village council, a central role, while women emphasized the school and church-affiliated organizations.

Step Three: Data Analysis

Participatory research generates qualitative data that need to begin to be analyzed in the field.

Time should be scheduled during the orientation to train the research team in field data analysis. Although this was not done in the Honduras study, a system was established in the field to organize and begin to analyze the voluminous data gathered through qualitative, participatory research. After each village stay, the team members spent several days together organizing their data: listing medicinal plants, their uses and users; finalizing drawings of household gardens and fields with their gendered spaces; and developing natural resource maps of the communities and gender disaggregated seasonal activities.

Notes taken during interviews and focus groups were analyzed within the conceptual framework of the research project using *content analysis*. The researchers reviewed their notes for emergent themes and examples of them. These were written up, shared and discussed with the other members of the team, and synthesized by the team leader.

Participatory research can inform the more traditional research components of the project.

The research in Southern Honduras consisted of two parts: the participatory research in the four communities and more formal interviews outside the communities. One part informed the other. During the field work, men and women identified the key institutions that influenced the communities or that em-

pliment migrant workers. These institutions, headquartered outside the communities and including nongovernmental organizations, governmental organizations, and corporations such as melon and sugar plantations, linked the communities to broader regional, national, and international systems. The team spent more than two weeks interviewing personnel from these organizations. Building on the results of the participatory research in the communities in this way was critical to more formally analyzing "interactions between resource use and social dynamics at a local level and the responses and influences of political-economic processes at the macro level."⁹

A blend of qualitative and quantitative analysis confirms and validates the research findings.

The formal confirmation survey developed from the qualitative field data helped confirm the validity of the themes that had emerged through the content analysis done in the field. The research team administered one hundred quantitative surveys, fifty-six to women and forty-four to men. Variables and coding categories for analysis of the survey data were established from the participatory field research data and secondary sources of similar research in Honduras and other parts of Latin America.

Analysis of the confirmation survey data involved the compilation of frequencies for each variable; bivariate analysis (i.e., key variables by community, gender, age, education level, household headship), and selected multivariate analysis (i.e., size of landholding or use of a specific conservation technique by community and by gender; membership in community group by gender and by age).

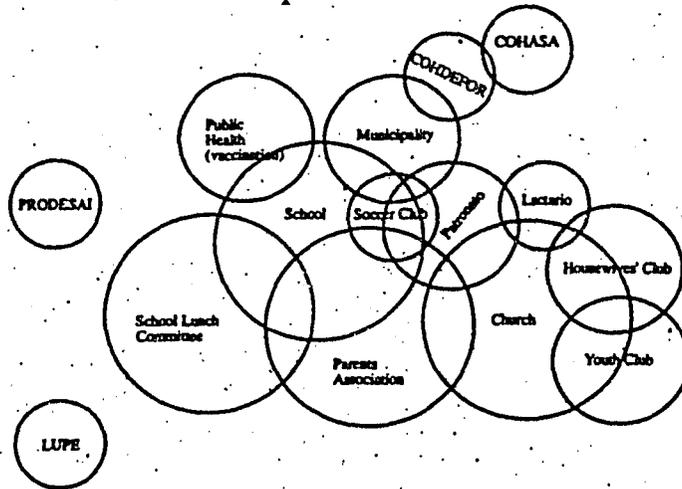
After the completion of the research, the team leader authored the final report and case study. The case study contains a combination of the quantitative data and the historical, descriptive, and anecdotal information from all the stages of the research process.

Step Four: Returning the Research to the Communities

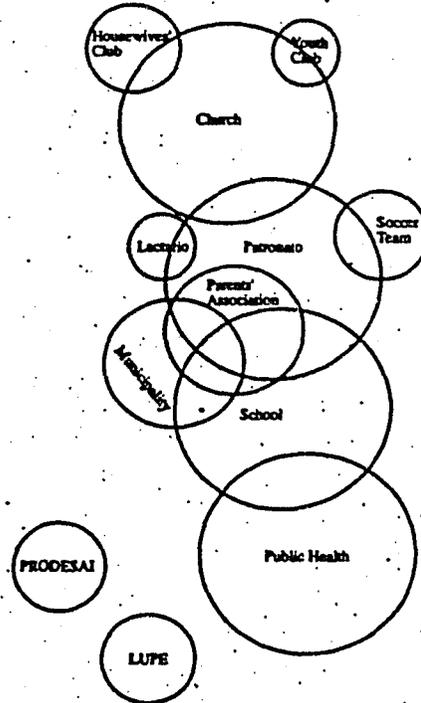
Participatory research includes returning the research to the participating communities for their verification, critique, and use.

Figure 4: Institutional Networks in el Zapote

Women's Perceptions



Men's Perceptions



Source: ECOGEN Field Data, 1992

At the end of the field research process, the team prepared a portfolio of information, including maps and diagrams, for use by local schools and nongovernmental agencies in the region. At a final meeting in each community, local participants received a packet of materials including a sketch map, community history time-line, natural resource profile, a list of trees and medicinal plants and their local uses, and a list of active community organizations. They also received educational posters based on the research findings, including a calendar of gender disaggregated seasonal activities, the typical days of a man and a woman, a history of changes in natural resources, and examples of community conservation techniques.

Final meetings in each of the four communities provided the Honduras team and community members with a forum to clarify remaining questions. Male and female participants had the opportunity to voice their opinions and discuss the materials presented. The discussions served

return to the communities for their use and critique some of the information the research team had gathered, analyzed, and interpreted. It also served as a means for the researchers to verify their preliminary findings.

About ECOGEN and DESFIL

ECOGEN is a sub-project of the Social and Institutional Aspects of Regional Resource Systems Project (SARSA II) funded by USAID. It was established at Clark University with Virginia Polytechnic Institute and State University to research how attention to gender may increase the equity and effectiveness of natural resource management programs. DESFIL promotes the participation of local resources users, both men and women, in the sustainable management of fragile lands. Both projects are supported by the USAID Office of Women in Development.

Summary of Lessons Learned

1. A conceptual framework and working questions guide the research.
2. The choice of research partners depends on the goals and priorities of the researchers, of those funding the research, and of those working with the communities.
3. The rationale for the choice of the research site should reflect the research goals.
4. A multidisciplinary team, with team members both native to the area and from outside the area, allows for cross-disciplinary and cross-cultural insights.
5. Continual team building among the researchers is a priority.
6. Keeping gender at the center of the research agenda requires constant vigilance.
7. A participatory research process requires tools that invite community participation.
8. Participatory research generates qualitative data that need to begin to be analyzed in the field.
9. A blend of qualitative and quantitative analysis confirms and validates the research findings.
10. Participatory research can inform more traditional research components of the project.
11. Participatory research includes returning the research to the participating communities for their critique, verification, and use.

¹ Urban, Anne-Marie and Mary Hill Rojas. "Shifting Boundaries: Gender, Migration and Community Resources in the Foothills of Choluteca, Honduras." Worcester, Massachusetts: ECOGEN, Clark University, 1994.

² For complete framework see Thomas-Slayter, Barbara, Diane Rochleau, et al. "Introducing the ECOGEN Approach to Gender, Natural Resources Management, and Sustainable Development." Clark University: Worcester, Massachusetts, 1992.

³ Thus minimizing "rural development tourism"- See Chambers, Robert. "Shortcut and Participatory Methods for Gaining Social Information for Projects." In Cernea, Michael (ed.) *Putting People First: Sociological Variables in Rural Development*, Second Edition, World Bank: Washington, D.C. 1991.

⁴ See Thomas-Slayter, Barbara, et al. "Tools of Gender Analysis: A Guide to Field Methods for Bringing Gender into Sustainable Resource Management." Clark University: Worcester, Massachusetts, 1993.

⁵ See also the National Environment Secretariat, World Resources Institute, Egerton University, Clark University. "Participatory Rural Appraisal Handbook: Conducting PRAs in Kenya." Washington, D.C.: World Resources Institute, 1990.

⁶ See Rochleau, Diane. "The User Perspective and the Agroforestry Research and Action Agenda." In Gholz H.L. (ed.) *Agroforestry: Realities, Possibilities, and Potentials*. Dordrecht: Martinus Nijhoff, 1987.

⁷ See, for example, Feldstein, Hilary Sims and Jiggins, J. (ed.), *Tools for the Field: Methodologies Handbook for Gender Analysis in Agriculture*. West Hartford, Connecticut: Kumarian Press, 1989; Cernea, Michael M. (ed.), *Putting People First: Sociological Variables in Rural Development*; Second Edition. Washington, D.C.: World Bank, 1991; and Vonway, Gordon R., "Rapid Appraisal Techniques for Sustainable Development." International Institute for Environment and Development: London, 1988.

⁸ Class, gender and ethnicity often interact. For example, gender roles and responsibilities and use of natural resources may vary along lines of class and ethnicity. A wealth ranking exercise can ensure that the interviews and group discussions include men and women from all socioeconomic groups as defined by the community. See, for example, Thomas-Slayter, Barbara, et al., "Tools of Gender Analysis: A Guide to Field Methods for Bringing Gender into Sustainable Resource Management." Clark University: Worcester, Massachusetts, 1993.

⁹ Tirupp, Lori Ann. "Political Ecology of Sustainable Rural Development: Dynamics of Social and Natural Resource Degradation." *Food for the Future: Conditions and Contradictions of Sustainability*. Allen, Patricia, ed. New York: John Wiley & Sons, Inc., 1993.

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