

**Biodiversity
Support
Program**

Project Evaluation Report

**BOSCOSA:
The Program for Forest
Management and Conservation
on the Osa Peninsula, Costa Rica**

Implemented by Fundación Neotrópica

By:

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Meg Symington

Prepared for USAID/Costa Rica

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LIST OF ACRONYMS

AACB	Asociación Ambientalista Cerro Brujo
ACOSA	Osa Conservation Area
ADESCAB	Asociación para el Desarrollo Sustentable y Conservación de la Cuenca de Agua Buena
APROFISA	Asociación de Productores de la Finca Sándalo
ASGUACA	Asociación de Guanabaneros de Cañaza
ASOFEP	Asociación Femenina de La Palma
ASOPRAQ	Asociación de Productores de Rancho Quemado
ASOPROSA	Asociación de Productores de la Osa
CAM	Cooperativa Cogestionaria de Productores Agroforestal e Industrial de la Península de Osa (Coopeagromuebles)
CAPE	Children's Alliance for the Protection of the Environment
CEA	Centro de Estudio Ambiental
CEDARENA	Center for Environment and Natural Resources Law
CONAI	Comisión Nacional de Asuntos Indígenas
COOPEMARTI	Cooperativa Autogestionaria de Mar y Tierra
CRACOSA	Comité Regional de Area de Conservación de Osa
CRAG	Chicago Rainforest Action Group
CRS	Catholic Relief Services
DANIDA	Danish Agency for International Development
DGF	General Forestry Directorate
DGM	General Mining Directorate
IAF	Inter-American Foundation
IDA	Instituto de Desarrollo Agrario
IMAS	Instituto Mixto de Ayuda Social
INA	Instituto Nacional de Aprendizaje
INBio	Instituto Nacional de Biodiversidad
ITCR	Instituto Tecnológico de Costa Rica
MAG	Ministry of Agriculture
MEP	Ministry of Public Education
MIRENEM	Ministry of Natural Resources, Energy and Mines
PRODERE	Refugee Development Program, United Nations Development Program (UNDP)
RIG	Reserva Indígena Guaymí
RFGD	Reserva Forestal Golfo Dulce
SiNAC	Sistema Nacional de Areas de Conservación
SIPRAICO	Sindicato de Productores Agrícolas Independientes del Cantón de Osa
SPN	National Parks Service
TNC	The Nature Conservancy
USAID	United States Agency for International Development
USFS	United States Forest Service
WRI	World Resources Institute
WWF	World Wildlife Fund

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Upon returning from the field, Barbara Tykal's editorial assistance and graphics by Faye Kepner, Kala Martin and Jim Mangani made the report readable. Ilana Locker's copy editing made the report presentable. Thanks also go to Kathy Saterson for her careful screening of the report's content.

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B.J.C.

PREFACE

The Program for Forest Management and Conservation on the Osa Peninsula, Costa Rica (BOSCOSA) is a four-year old (1988-1992) pilot effort designed to demonstrate sustainable economic alternatives that will contribute to the maintenance of forest cover in the buffer zone surrounding the Corcovado National Park in southwestern Costa Rica. BOSCOSA is administered by Fundación Neotrópica and receives its core financial support from USAID/Costa Rica. A variety of other donors have supported BOSCOSA's initiatives, including World Wildlife Fund's Tropical Forestry Program, which originally designed BOSCOSA in collaboration with Fundación Neotrópica, and has provided financial support since the program's inception in 1987. In April 1992, USAID/Costa Rica requested assistance from the Biodiversity Support Program (BSP), an A.I.D.-funded consortium of World Wildlife Fund, The Nature Conservancy, and World Resources Institute. BSP's assignment was to conduct an evaluation of BOSCOSA's activities to date, and provide recommendations to improve its future implementation (see Appendix A for the evaluation's scope of work).

The evaluation was carried out by a four-person team: Bruce Cabarle, Team Leader and forester; Paula Palmer, sociologist; Meg Symington, biologist and tropical ecologist; and Jerry Bauer, forester (see Appendix I for team member's qualifications and institutional affiliations). Mr. Cabarle, Ms. Palmer and Dr. Symington were supported by USAID/Costa Rica through the Biodiversity Support Program; Mr. Bauer's participation was funded by World Wildlife Fund through the U.S. Forest Service Tropical Forestry Program. None of the team members had any association with the BOSCOSA program or Fundación Neotrópica prior to the evaluation.

The evaluation team spent almost three weeks in Costa Rica. Eleven days were spent on the Osa Peninsula visiting project sites and interviewing BOSCOSA staff, project beneficiaries and representatives of other institutions working in the region. Appendix C contains a detailed itinerary of the team's activities while in Costa Rica. Appendix D provides a list of people contacted during the course of the evaluation. Documents reviewed by the team in preparation for and during the evaluation are noted in Appendix H.

This evaluation was prepared for USAID/Costa Rica by the Biodiversity Support Program, under cooperative agreement # DHR-5554-A-00-8044-00 between the U.S. Agency for International Development and the World Wildlife Fund.

EXECUTIVE SUMMARY

Protected areas throughout the tropics are under intense threat of degradation due to escalating demands for the land and resources that they harbor. Conventional methods of securing park boundaries with guards, fences and punitive land-use restrictions are increasingly failing to protect park resources. A different response to this dilemma is the linking of conservation activities with social and economic development for local people who live in and around protected areas. BOSCOSA, conceived in 1987 by WWF and Fundación Neotrópica to reduce pressures and stabilize land-use around the Corcovado National Park, is one of a new generation of projects called "Integrated Conservation and Development Projects," a term described by Wells et al. (1992).

This evaluation was performed to assess the BOSCOSA project's progress since its first evaluation in 1989 (Irvine, et al., 1989). Our purpose was to determine how well BOSCOSA's objectives have been achieved since 1989, identify the relative strengths and weaknesses of the project's organizational and methodological approaches, suggest how these might be improved, and provide USAID/Costa Rica with recommendations concerning future directions for continued support. The team employed a matrix to conduct the evaluation which measured the project's impact in four key areas: social, economic, ecological, and political. Eleven indicators were established by the team to evaluate BOSCOSA's performance in the four areas. The team also evaluated Fundación Neotrópica's operational structure for implementation of the BOSCOSA project.

Background

The Osa Peninsula, approximately 175,000 ha in size and located in southwestern Costa Rica, contains the only remaining lowland wet forest on the Pacific coast of Central America. The Peninsula, which began as a volcanic island between 65 and 135 million years ago, now includes within its limits the Corcovado National Park, the Golfo Dulce Forest Reserve, the Guaymí Indigenous People's Reserve, the Isla del Caño Biological Reserve, the Sierpe-Terraba Mangrove Reserve, Golfito Wildlife Refuge, and other non-protected lands (see Figure 1). The protected areas on the Osa are administered by ACOSA, an inter-institutional unit established by MIRENEM in 1989, to coordinate the activities of the various line agencies (SNP, DGF, DGM, etc.) with jurisdictional responsibilities over natural resources within the Osa Conservation Area. There are roughly 50,000 inhabitants on the Peninsula of which some 10,000 live within the confines of the Golfo Dulce Forest Reserve. The Osa forests are very diverse and home to more than 2000 plant species and 27 vegetative associations.

The Peninsula's recent economic history is one of "boom and bust." The local economy has always been based on resource extraction, beginning with gold in the 1930s, bananas through the 1950s, timber in the 1960s and 1970s, and agro-industrial exports in the 1980s. With recent road improvements, timber exploitation is enjoying a resurgence, and rice and African oil palm plantations are being expanded. The first protected area on the Osa was declared in 1975, and was followed by successive expropriations of local residents. These events fomented social conflict over several

decades, resulting in a transient and aggravated local population, fragmented and insecure land tenure, economic instability, a deep mistrust of government, and rampant deforestation.

Project Description

BOSCOSA's purpose is "to develop and demonstrate natural forest management, sustainable agriculture, ecotourism, and biodiversity technologies which are economically productive and contribute towards the maintenance of forest cover" on the Osa Peninsula. BOSCOSA's operating principles include the following: local groups serve as the vehicles for project activities; local organizations make the decisions regarding the focus of a particular community; the grassroots organizations and BOSCOSA form partnerships to attract credit and other financial resources which are then managed independently by the local group; and BOSCOSA complements its work with participation in regional and national level policy and planning exercises.

BOSCOSA's objective is to slow deforestation by providing local residents with education and economic alternatives that contribute to the maintenance of forest cover. Its activities are meant to complement rather than replace conventional protection activities. BOSCOSA's forest management activities focus on sustainable timber production, portable sawmills, and forest conservation — through conservation easements, forest trusts and community forest concessions. The project's agricultural activities focus on extension and technical assistance for non-traditional, perennial cash-crops that provide improved ground cover, and small-scale agro-industrial processing. These productive activities are supplemented by smaller initiatives in carpentry, handicrafts and ecotourism. BOSCOSA staff members are also actively involved in various regional land-use planning initiatives with MIRENEM agencies. Through this diverse portfolio of mechanisms, BOSCOSA is well on its way to securing, by the end of 1992, close to 6,500 ha under improved land-use in the area surrounding the Corcovado National Park.

BOSCOSA support services provide environmental education, research, information management and training in organizational development, administration, accounting, marketing, and fundraising. Workshops in cultural promotion and artisan development, and a paraforester training course, are also included in the training program.

Findings

This evaluation found that the most significant impacts of BOSCOSA's work are in the areas of social and ecological sustainability. No significant impact was noted by the team in economic or political sustainability; due, in part, to the project's short life span and its emphasis on developing the capacity of local organizations.

Social sustainability has promoted positive changes in attitude towards forest conservation and sustainable management of forest resources, as witnessed by the 6,500 ha under improved land-use. BOSCOSA has been the primary force behind the organizational development of the Osa communities, resulting in the creation of eight grassroots organizations since the project's inception.

Training offered by the project has benefited ten grassroots organizations, building sorely needed skills within groups that encompass over 600 members, a significant portion of the Osa Peninsula population. The project has impacted human resource development profoundly since its inception. Some 72 women and 114 men have received training; over 80 training events have been conducted in handicrafts alone over the past four years. In addition, a group of eleven young men are currently enrolled in the paraforester training program. These training sessions have led to the emergence of new leaders who are ready and willing to lead the Osa communities into the future. BOSCOA has also increased employment in the form of 56 jobs. Only a handful of these jobs have resulted from the direct hiring of local environmental educators, paraforesters, and project support staff; the majority are the result of self-sustaining activities, such as the CAM nursery. In addition, BOSCOA has been effective at leveraging financial assistance from a variety of national and international sources; almost US \$1 million has been channeled to 11 grassroots organizations.

Ecologically, BOSCOA has stabilized land-use around the Corcovado National Park and lowered the risk of forest being cleared for agricultural use. This is true for both publicly-owned and privately-owned forests. Agricultural land-use has improved, with some 290 ha of degraded pasture lands being reforested and close to 160 ha having been switched from annual to perennial crop production by farmers belonging to grassroots organizations that receive technical assistance from BOSCOA.

There has been little change in the policies, economic incentives or land tenure laws which fuel deforestation on the Osa Peninsula. However, BOSCOA has catalyzed increased institutional cooperation, serving as a liaison among the various governmental bodies with responsibility on the Osa. An effective coalition of groups and interests working towards a common goal has been established, and will hopefully lay the foundation for the larger economic and policy changes needed in the future if the forest is to survive.

Recommendations

The evaluation includes 26 recommendations to improve the social, economic, ecological, and political sustainability of the BOSCOA project. These cover such aspects as agricultural marketing and extension, forest management guidelines, staff training, the forthcoming environmental education center, research through cooperative agreements, the FIPROSA Trust, the placement of the Osa biological corridor, and the design of a "user friendly" information management system. The team strongly recommends that Fundación Neotrópica modify BOSCOA's operational structure to emphasize agriculture, forestry, and other productive activities which help local people meet their subsistence and cash needs. A marketing specialist should be added to the team to evaluate and develop market outlets for all of the products promoted by BOSCOA.

BOSCOA has demonstrated tremendous potential. Fundación Neotrópica has done a commendable job in launching the project and maintaining its momentum despite very difficult circumstances. Given the obstacles to be overcome, substantial accomplishments have been realized in a relatively short time. Continued support from USAID/Costa Rica should allow Fundación Neotrópica to move the BOSCOA project in three general directions deemed critical to achievement of the project's goals: marketing analysis, staff training in technical fields and participatory methodologies, and strengthening of the agricultural and forestry programs.

RESUMEN EJECUTIVO

Las áreas protegidas a lo largo de los trópicos se encuentran bajo la intensa amenaza de la degradación, debido a que abrigan una acelerada demanda de tierra y recursos. Los métodos de seguridad convencionales para proteger los límites de parques: guardias, cercas y restricciones punitivas con respecto al uso de la tierra, son cada vez menos efectivos. Una respuesta diferente a este dilema consiste en vincular las actividades de conservación con el desarrollo social y económico de los pobladores locales que habitan dentro y alrededor de las áreas protegidas. BOSCOSA, concebida en 1987 por el WWF y la Fundación Neotrópica con el propósito de reducir las presiones y estabilizar el uso de la tierra en los alrededores del Parque Nacional Corcovado, pertenece a una nueva generación de proyectos llamada "Proyectos Integrados de Conservación y Desarrollo," término descrito por Wells y colaboradores (1992).

El propósito estudio se realizó con el fin de medir el avance del proyecto BOSCOSA desde su primera evaluación en 1989 (Irvine y colaboradores, 1989). Nuestro propósito era determinar hasta que punto se habían cumplido los objetivos BOSCOSA desde 1989, identificar los puntos fuertes y débiles de los enfoques metodológicos y organizacionales del proyecto, sugerir maneras de mejorarlos, y dar recomendaciones a USAID/Costa Rica con respecto a la orientación futura para un apoyo continuo. Para conducir la evaluación, el equipo utilizó una matriz que midiera el impacto del proyecto en cuatro áreas clave: social, económica, ecológica y política. Se establecieron once indicadores para evaluar el rendimiento de BOSCOSA en las cuatro áreas. El equipo también evaluó la estructura operacional de la Fundación Neotrópica para la implementación del proyecto BOSCOSA.

Antecedentes

La Península de Osa, cuya extensión aproximada es de 175,000 hectáreas, localizada al suroeste de Costa Rica, resguarda el único remanente de bosque húmedo de tierra baja sobre la costa centroamericana del Pacífico. La península, que comenzó como una isla volcánica hace entre 65 y 135 millones de años, actualmente incluye dentro de sus límites al Parque Nacional Corcovado, la Reserva Forestal Golfo Dulce, la Reserva Indígena Guaymí, la Reserva Biológica Isla del Caño, la Reserva Forestal Manglares Sierpe-Terraba, el Refugio de Vida Silvestre Golfito, y otras tierras no protegidas (ver Figura 1). Las áreas protegidas en la Osa son administradas por ACOSA, una unidad interinstitucional establecida por MIRENEM en 1989, para coordinar las actividades de las varias agencias interesadas (SNP, DGF, DGM, etc.) que tienen responsabilidades jurisdiccionales sobre los recursos naturales dentro del Área de Conservación de Osa. Hay aproximadamente 50,000 habitantes en la península, de los cuales unos 10,000 viven dentro de los confines de la Reserva Forestal Golfo Dulce. Los bosques de Osa son muy diversos y dan refugio a más de 2,000 especies vegetales y a 27 asociaciones vegetativas.

La historia reciente de la península ha sido de "auge y fracaso." La economía local se ha basado siempre en la extracción de recursos, comenzando con el oro en los 1930s, plátanos a través de los 1950s, madera en los 1960s y 1970s, y exportaciones agroindustriales en los 1980s. Con las recientes

mejoras en los caminos, la explotación maderable goza de un nuevo auge, y las plantaciones de arroz y de palma africana de aceite se han expandido. En 1975, se declaró la primera área protegida en la Osa, seguida de sucesivas expropiaciones de residentes locales. Estos acontecimientos fomentaron conflictos sociales durante varias décadas, dando lugar a la movilización y descontento de la población, a la tenencia fragmentada e insegura de la tierra, inestabilidad económica, una profunda desconfianza hacia el gobierno y a la deforestación desenfrenada.

Descripción del Proyecto

El propósito de BOSCOsa es "desarrollar y demostrar el manejo de bosques naturales, agricultura sostenida, ecoturismo y tecnologías de biodiversidad que sean económicamente productivas y contribuyan al mantenimiento de la cubierta forestal" en la Península Osa. Los principios operacionales de BOSCOsa son los siguientes: grupos locales sirvan como vehículos para las actividades del proyecto; organizaciones locales toman las decisiones con respecto al enfoque de una comunidad en particular; las organizaciones comunitarias y BOSCOsa se asocian para atraer créditos y otros recursos financieros, los cuales sean entonces administrados independientemente por el grupo local; y BOSCOsa complementa su trabajo con participación en la política a nivel regional y nacional y con ejercicios de planificación.

El objetivo de BOSCOsa es el de atenuar la deforestación proporcionando a los residentes locales educación y alternativas económicas que contribuyan al mantenimiento de la cubierta forestal. Las actividades de BOSCOsa pretenden complementar, más que reemplazar, las labores convencionales de protección. El manejo forestal de BOSCOsa se enfoca en la producción sostenida de madera, aserraderos portátiles y la conservación forestal — mediante equipos de apoyo, fideicomisos forestales y concesiones forestales comunitarias. Las actividades agrícolas del proyecto se enfocan en la extensión y asistencia técnica de cultivos perennes comerciales no tradicionales que proveen una cubierta terrestre mejorada, y en el procesamiento agroindustrial de pequeña escala. Estas actividades productivas se suplementan con iniciativas menores en carpintería, artesanías y ecoturismo. El personal de BOSCOsa está activamente involucrado en varias iniciativas regionales de planificación del uso de la tierra con las agencias de MIRENEM. Por medio de esta diversa cartera de mecanismos, BOSCOsa está bien encaminado a asegurar, para fines de 1992, el mejoramiento en el uso de la tierra de cerca de 6,500 hectáreas en el área que rodea el Parque Nacional Corcovado.

Los servicios de apoyo de BOSCOsa proporcionan educación ambiental, investigación, manejo de información y capacitación en el desarrollo organizacional, administración, contabilidad, mercadotecnia y adquisición de fondos. En programa de capacitación incluye también talleres de promoción cultural y desarrollo artesanal, así como un curso de entrenamiento para forestal.

Hallazgos

Esta evaluación señaló que los impactos más significativos del trabajo de BOSCOsa se encuentran en las áreas de sostenibilidad social y ecológica. El equipo no observó un impacto significativo en la sostenibilidad económica o política; debido, en parte, al corto período de vida del proyecto y al énfasis del mismo en desarrollar la capacidad de las organizaciones locales.

La sostenibilidad social ha promovido cambios positivos en la actitud hacia la conservación forestal y el manejo sostenido de recursos forestales, como lo evidencian las 6,500 hectáreas sometidas al uso mejorado de la tierra. BOSCOSA ha sido la fuerza primordial detrás del desarrollo organizacional de las comunidades de Osa, dando como resultado la creación de ocho organizaciones comunitarias desde los inicios del proyecto. La capacitación brindada por el proyecto ha beneficiado a diez de estas organizaciones, desarrollando habilidades de extrema necesidad para los grupos constituidos por más de 600 miembros, porción significativa de la población de la Península de Osa. El proyecto ha impactado profundamente en desarrollo de los recursos humanos desde sus comienzos. 72 mujeres y 114 hombres han recibido capacitación; se han conducido más de 80 eventos de capacitación durante los últimos cuatro años. Además, un grupo de once jóvenes varones están inscritos actualmente en el programa de capacitación paraforestal. Estas sesiones de entrenamiento han conducido al surgimiento de nuevos líderes, listos y dispuestos a dirigir hacia el futuro a las comunidades de Osa. BOSCOSA ha incrementado el empleo, creando 56 puestos de trabajo. Sólo un puñado de estos empleos han resultado de la contratación directa de educadores ambientales locales, paraforestales y personal de apoyo al proyecto; la mayoría son resultado de actividades auto-sostenidas, tales como el vivero de CAM. Además, BOSCOSA ha influido efectivamente en la obtención de asistencia financiera de una variedad de fuentes nacionales e internacionales: casi un millón de dólares americanos han sido ya canalizados hacia once organizaciones comunitarias.

Ecológicamente, BOSCOSA ha estabilizado el uso de la tierra alrededor del Parque Nacional Corcovado y ha reducido el riesgo de la tala de bosques para uso agrícola. Esto es aplicable tanto a los bosques de propiedad pública como privada. El uso agrícola de la tierra se ha mejorado al reforestar unas 290 hectáreas de pastizales degradados y al transformar casi 160 hectáreas de cultivos anuales a perennes, lo cual fue llevado a cabo por los campesinos miembros de las organizaciones comunitarias que recibieron la asistencia técnica de BOSCOSA.

Poco ha cambiado en la política, los incentivos económicos o las leyes de tenencia de la tierra que estimulan la deforestación en la Península de Osa. Sin embargo, BOSCOSA ha catalizado una mayor cooperación institucional, sirviendo como enlace entre las diversas corporaciones gubernamentales con responsabilidad en Osa. Se ha establecido una coalición efectiva de grupos e intereses que trabajan por una meta común y que se espera positivamente que se establezcan los cimientos para los grandes cambios económicos y políticos necesarios en el futuro, si el bosque ha de sobrevivir.

Recomendaciones

La evaluación incluye 26 recomendaciones para mejorar la sostenibilidad social, económica, ecológica y política del proyecto BOSCOSA. Estas abarcan aspectos como el mercadeo y la extensión agrícolas, pautas para el manejo forestal, capacitación de personal, el futuro centro de educación ambiental, la investigación a través de convenios cooperativos, el Fondo FIPROSA, el establecimiento del corredor biológico de Osa y el diseño de un sistema de manejo de información de "uso fácil." El equipo recomienda fuertemente que la Fundación Neotrópica modifique la estructura operativa de BOSCOSA para darle énfasis a actividades agrícolas, forestales y otras labores productivas que ayuden a la población local a satisfacer sus necesidades de subsistencia e ingresos económicos. Un especialista en mercadeo debería unirse al equipo para evaluar y desarrollar mercados para todos los productos promovidos por BOSCOSA.

BOSCOSA ha demostrado un tremendo potencial. La Fundación Neotrópica ha realizado una labor encomiable al lanzar este proyecto y mantener su ímpetu a pesar de circunstancias muy difíciles. Tomando en cuenta los obstáculos que quedan por vencer, se han obtenido logros sustanciales en un período de tiempo relativamente corto. El apoyo continuo de USAID/Costa Rica permitiría a la Fundación Neotrópica impulsar el proyecto de BOSCOSA en tres direcciones generales que se consideran críticas para alcanzar las metas del proyecto: análisis de mercados, capacitación del personal en las áreas técnicas y de metodologías participativas, así como el fortalecimiento de los programas agrícolas y forestales.

I. INTRODUCTION

A. Project Setting

The Osa Peninsula, approximately 175,000 ha in size and located in southwestern Costa Rica, contains the only remaining lowland wet forest on the Pacific coast of Central America. The Peninsula, which began as a volcanic island between 65 and 135 million years ago, now includes within its limits the Corcovado National Park, the Golfo Dulce Forest Reserve, the Guaymí Indigenous People's Reserve, the Isla del Caño Biological Reserve, the Sierpe-Terraba Mangrove Reserve, Golfito Wildlife Refuge, and other non-protected lands (see Figure 1). The protected areas on the Osa are administered by ACOSA, an inter-institutional unit established by MIRENEM in 1989, to coordinate the activities of the various line agencies under MIRENEM (SNP, DGF, DGM, etc.) having jurisdictional responsibilities over natural resources within the Osa Conservation Area.

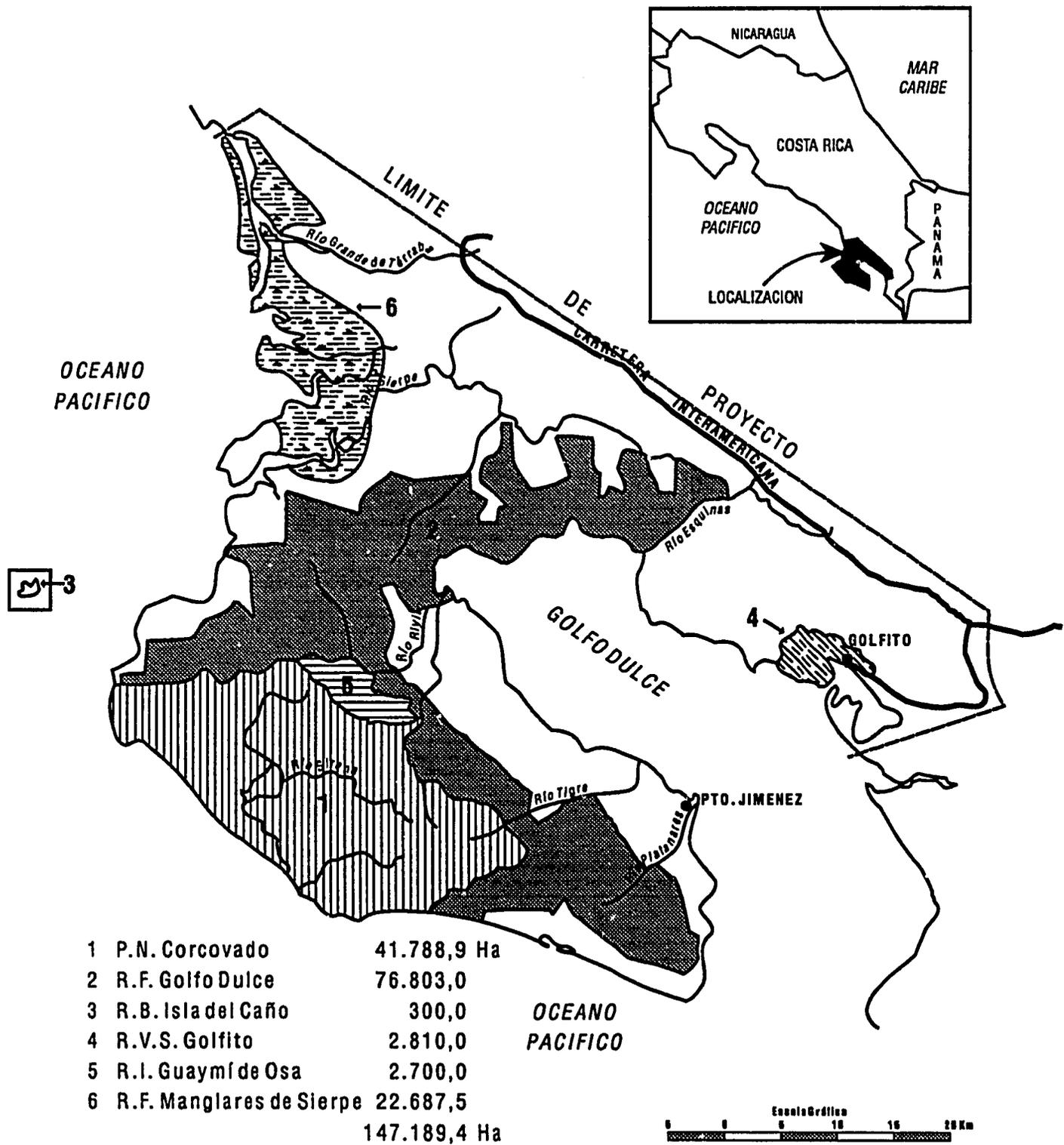
According to the Holdridge Life Zone Classification System, the Osa Peninsula contains three life zones: Very Wet Tropical Forest, Very Wet Tropical Forest in Transition to Premontane Zones, and Very Wet Premontane Forests in Transition to Pluvial Zones (Irvine, et al., 1989). The Osa is one of the wettest regions of Costa Rica, receiving between 3.1 and 6.5 meters of rain annually. The most rainfall is between August and November, and there is a relatively drier period between January and April. Most of the Peninsula is composed of steeply sloping land with elevations ranging from sea level to 745 meters. The topography flattens around the shorelines of the Golfo Dulce and at the mouths of the major rivers.

According to Irvine, et al. (1989), the Tropical Science Center's Land-Use Classification System¹ defines four classes of appropriate land-use for the Peninsula.

- Class VII/LL: This category of land-use covers more area of the Osa than any of the other three classifications. The area is not suitable for the cultivation of agricultural crops, but is recommended for forestry uses. Limiting factors in this classification include high precipitation, 15-45% slopes, and poor drainage.
- Class II/L: Class II lands are classified as suitable for annual crops and produce relatively high yields. This class of land can support almost any type of land-use, provided that land-uses are well-defined and well-managed.
- Class III/P: Class III lands are generally classified as suitable for annual crops but produce only moderate yields. Oftentimes, these lands have high slopes, rocky soils, and are prone to flooding. Soil conservation practices and crop systems should be applied to these soils.
- Class VIII/LL: Lands in this class do not have any characteristics that make them suitable for any type of cultivation or grazing. The only use for these lands is to maintain forest cover for watershed and wildlife protection. Precipitation is a major limiting factor for these soils, as they do not drain well and in some cases, do not drain at all.

The Osa Peninsula is an area of unique biological importance and Corcovado National Park - the Peninsula's centerpiece - has been referred to as "the crown jewel of the Costa Rican Park System." The Osa's unique biological characteristics are the result of its geographic location within the land bridge between North and South America and its uncommon mixture of climates, soils, and vegetation. Some 27 forest types, or vegetative associations, occur on the Peninsula. At least 750 species of trees, 139 species of non-flying mammals, 76 species of bats, 115 species of

Figure 1: Protected Areas of the Osa Peninsula



Source: Irvine, et al., November 22, 1989.

reptiles and amphibians, and over 350 species of birds have been recorded for the Osa. These impressive figures will undoubtedly increase once results from the recently completed Rapid Ecological Assessment (REA) of the Osa are compiled. For reasons not yet well understood, the Osa Peninsula contains a number of tree and other plant species encountered routinely in South America but found nowhere else in Central America. In addition to these disjunct species, there are at least 50 endangered or threatened plant species recorded from the Osa, and approximately 10% of the plant specimens collected on the Peninsula are either undescribed species or new records for Costa Rica.

It is estimated that roughly one third of the original forest cover in the Forest Reserve has already been lost. The deforestation rate of the approximately 40,000 ha remaining is estimated to be five percent per year.

Of the roughly 50,000 inhabitants of the Osa Peninsula, approximately 10,000 live within Golfo Dulce Forest Reserve (see Figure 2). Most are recent immigrants; very few families have lived on the Peninsula for more than 20 years. A socioeconomic study conducted for the Osa Peninsula revealed that 99.9 percent of the population is mestizo, and 40 percent are illiterate.

B. Project Description

BOSCOSA's goal, according to the project description dated March 30, 1990, is "to maintain forest cover for productive and natural resources conservation purposes in the buffer zone surrounding Corcovado National Park in the Osa Peninsula." BOSCOSA's purpose is "to develop and demonstrate natural forest management, sustainable agriculture, ecotourism and biodiversity technologies which are economically productive and contribute towards the maintenance of forest cover."

BOSCOSA began field activities in 1988, approximately four and a half years ago, with funds from World Wildlife Fund (WWF) and its then affiliate, the Conservation Foundation (CF), a matching grant from AID/Washington, and local currency support from USAID/Costa Rica. Since that time, BOSCOSA has grown enormously in size and funding. Table 1 shows BOSCOSA's funding sources from 1988 through 1992.

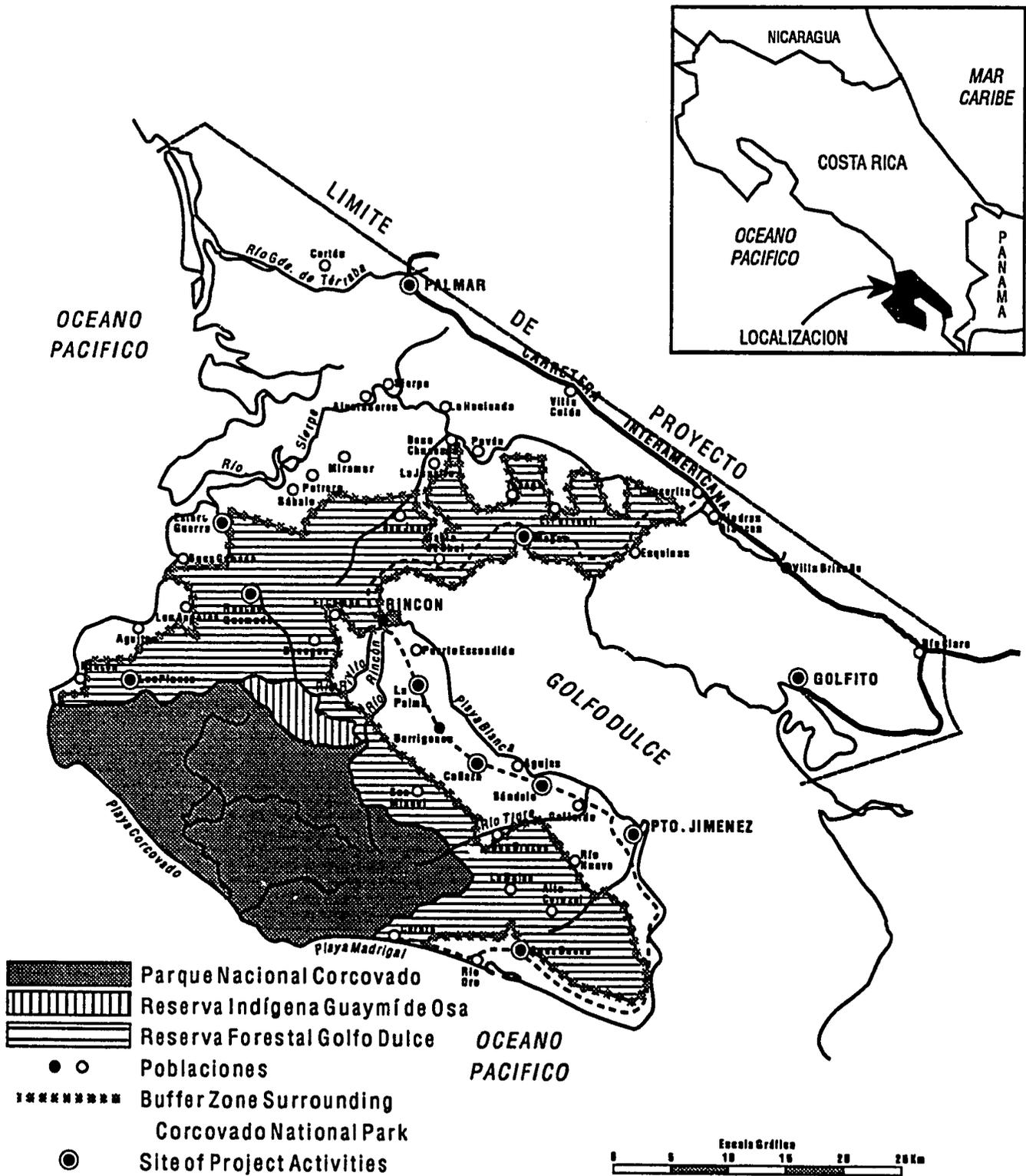
In March 1990, USAID/Costa Rica awarded a three-year, \$1 million operational program grant to Fundación Neotrópica to support BOSCOSA's core operational costs. USAID/Costa Rica's generous support was instrumental in leveraging an additional \$8.7 million to improve forest conservation and management on the Osa Peninsula. Total donor contributions for forest conservation and management on the Osa Peninsula, since BOSCOSA's inception, now total over \$11 million (Table 2).

Prior to the award of the March 1990 grant, WWF and USAID/Costa Rica carried out a joint evaluation of the project's first two years (see Irvine, et al., 1989). BOSCOSA's activities since that first evaluation are the focus of this current evaluation.

Certain features of the project have remained fairly constant since the project's inception. These features, which BOSCOSA considers to be its "operating principles," are summarized below:

- 1) Local grassroots NGOs serve as the vehicles for project activities; i.e., the project does not work with individual, unorganized farmers.
- 2) Local organizations make the decisions regarding whether forestry, agriculture, or other economic alternatives are the focus within a particular community.

Figure 2: Population Centers of the Osa Peninsula



Source: Irvine, et al., November 22, 1989.

Table 1: BOSCOA Project Funding Sources, 1988-92

Donor	Amount (US\$)	Activity	Year
AID	100,000	General Support	89-90
AID	1,000,000	General Support	90-93
WWF	180,000	General Support Osa "2000" Strategy	88-92
WWF	70,000	Rapid Ecological Assessment	90
WWF/USFS	44,628	Paraforester training	90-91
CRS	2,100	Training	90
CRS	70,000	Training	90-92
MIDEPLAN	48,527	GDFR mgmt plan	90-91
DGF	20,509	GDFR mgmt plan	90-91
DANIDA	1,200,000	Centro Juvenil Tropical	92-94

Total funding obtained by Fundación Neotrópica for the BOSCOA project through June 1992: US \$2,735,764.

- 3) BOSCOA is a source of technical assistance only; the project does not provide direct financing or materials to the grassroots groups with which it works.
- 4) The grassroots groups and BOSCOA form partnerships to attract credit and other financial resources from outside sources; these resources are then managed directly by the grassroots groups themselves.
- 5) BOSCOA complements its grassroots work with participation in regional and national level policy and planning.

At the time of this evaluation, BOSCOA had 26 full-time staff, five part-time, consultant, and volunteer staff (see Appendix G,

BOSCOA Staff Members), and an annual operating budget of approximately \$300,000. Staff members work in eight program areas: forestry, agriculture, training, environmental education, ecotourism, research, information management, and policy. BOSCOA focuses its efforts in these areas by working with ten priority grassroots organizations selected by the staff. Why BOSCOA chooses to work with particular community groups and not with others is based upon the motivation and interest level exhibited by the community, the size of the group, the amount of forested land held by the group's members that can feasibly be agglomerated into larger units, geographic location, and various national and regional political considerations. Summaries of BOSCOA's impact on each of the ten

Table 2: Summary of Donor Contributions for the OSA Peninsula

Donor	Amount (US\$)
ACOSA	15,800
AID Agencia Internacional para el Desarrollo -- USA	1,100,000
ASDI Autoridad Sueca para el Desarrollo Internacional	2,500,000
BM-PNUMA-PNUD-Banco Mundial -- Naciones Unidas	5,000,000
CAPE Alianza de Niños para la Protección del Ambiente -- USA	300,000
CEA Centro de Estudios Ambientales -- USA	37,500
CRAG Chicago Rainforest Action Group -- USA	7,000
CRS Catholic Relief Services -- USA	184,798
DANIDA Danish International Development Agency -- Denmark	1,200,000
DGF Dirección General Forestal	20,509
Embajada Real de los Países Bajos -- Netherlands Embassy	18,988
FAO - CNP	9,697
FDF Fondo de Desarrollo Forestal	215,024
Federación de Centros Agrícolas Cantonales	42,300
FIA Fundación Interamericana -- USA	85,813
Fundación Costa Rica -- Canada	31,500
Fundación Neotropical (compromiso)	8,305
Grupo de Scouts de Alemania	12,500
IMAS Instituto Mixto de Ayuda Social	1,399
ITF -- Netherlands	5,000
MIDEPLAN (Fondo de Preinversión)	48,527
MIRENEM (Fondo Forestal)	59,436
PRODERE Programa de Refugiados de la ONU	3,784
Rain Forest Alliance	1,000
Regenwald -- Germany	37,500
TNC The Nature Conservancy -- USA	140,000
Voluntarios	311
Voz del Indio	385
WWF	325,000
WWF/USFS	44,628
Total	US\$ 11,456,644

grassroots organizations with which it currently works are found in Appendix E, Grassroots Organization Summaries.

BOSCOSA's forestry activities focus on productive forestry activities (natural forest management and reforestation), promotion of forest conservation through conservation easements, forest trusts and concession mechanisms, and various regional land-use planning initiatives such as the Golfo Dulce Forest Management Plan, Guaymí Reserve Management Plan, and the Osa 2000 Strategy Report. By the end of 1992, BOSCOSA staff hope to have over 2000 ha of forest managed under plans developed with BOSCOSA technical assistance. Several grassroots organizations with which BOSCOSA works hope to use small, portable sawmills to integrate light forest industry with their harvesting plans in order to add as much value as possible locally.

BOSCOSA's efforts in agriculture currently focus on extension and technical assistance for non-traditional cash crops such as peach palm (pejibaye), coco-yam (fiame), new coco-yam (tiquisque or dashene) and soursop (guanábana). There are also plans and financing for an agro-industrial initiative in guanábana processing.

In environmental education, BOSCOSA staff work with target groups and make presentations at local schools. In coordination with the Ministry of Public Education and ACOSA, the staff organized two environmental education workshops for all of the school teachers on the Peninsula (ca. 40 teachers), and is in the process of establishing a children's environmental education center, the Centro Juvenil Tropical, with US \$1.2 million from DANIDA.

BOSCOSA's training program, financed by a Catholic Relief Services's grant, covers organizational development, administration, accounting, marketing, and proposal

formulation. Workshops in cultural promotion and artisan development, and a paraforester training course are also included within this programmatic area.

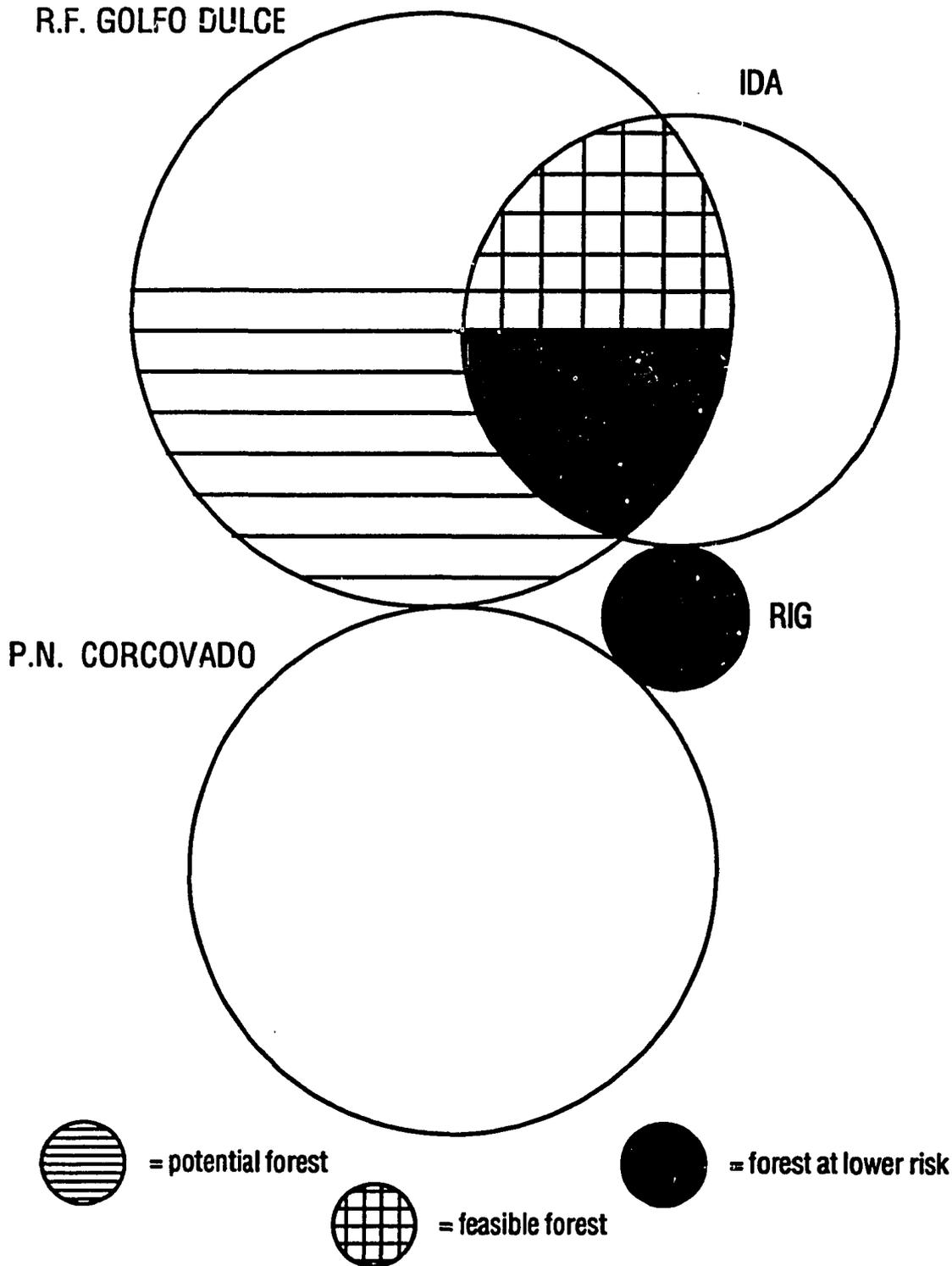
The ecotourism program is mostly involved in regional initiatives at this point, including the establishment of a regional tourism commission for the Osa Peninsula. BOSCOSA hopes to expand its efforts to help local groups develop ecotourism initiatives within their communities in the near future.

BOSCOSA's policy program is implemented jointly through a special arrangement with CEDARENA, a Costa Rican NGO specializing in environmental law. The program is currently focused on defining and securing the land holdings of the Guaymí Indians in the Guaymí Reserve, and drawing up a land use management plan for the Peninsula that would include long-term concessions to local communities living within the Golfo Dulce Forest Reserve but outside of IDA jurisdiction (see "potential forest" in Figure 3, What Forests Can BOSCOSA Save?).

BOSCOSA's research program recently completed a Rapid Ecological Assessment designed to fill gaps in the existing biological knowledge of the Osa. The results will be used to design an integrated applied research plan for the Peninsula. Through an agreement with the Instituto Tecnológico de Costa Rica, research is being conducted on forest harvesting techniques and environmental impacts. The project has also established a number of permanent plots for reforestation trials.

In information management, BOSCOSA recently established a Geographic Information System for the Osa, which is maintained at Fundación Neotrópica headquarters in San José. Information management staff are working to define an appropriate monitoring program for BOSCOSA.

Figure 3: What Forests Can BOSCOSA Save?



The majority of the forest remaining on the Osa Peninsula is fragmented into several, and sometimes overlapping jurisdictions. The area of "potential forest" represents those forests under DGF jurisdiction where forest zone inhabitants cannot establish legal residence. They are regarded as squatters on public forest lands. The area of "feasible forest" represents forest lands under both DGF and IDA jurisdiction where some forest zone inhabitants can establish legal residence. These are the communities where BOSCOSA can lend technical assistance.

Summaries of the team's interviews with BOSCOA staff in each of the eight programmatic areas can be found in Appendix F, BOSCOA Program Area Summaries.

The project's flexible design and strong internal feedback mechanisms have allowed BOSCOA's activities to evolve and adapt to changing needs as the project has grown. But throughout, BOSCOA's primary focus on sustainable development with local campesinos has remained constant. The project's aim is to slow deforestation on the Osa Peninsula by providing local residents with education and economic alternatives that contribute to the maintenance of forest cover; BOSCOA was never intended to be a strict protection project. Its activities are meant to complement, not replace, conventional protection activities.

C. Evaluation Methodology

The purpose of this evaluation report is twofold: (1) to determine BOSCOA's progress in achieving the project's objectives; and (2) to identify the relative strengths and weaknesses of BOSCOA's organization and methodological approaches. This evaluation is also intended to provide USAID/Costa Rica and Fundación Neotrópica with an analysis of how project implementation might be improved, and how future USAID support to BOSCOA might be oriented.

The scope of work for the evaluation (see Appendix A), was developed jointly by USAID/Costa Rica, the Biodiversity Support Program, and the implementing agency, Fundación Neotrópica. It provides the basis for defining appropriate indicators by which to judge the BOSCOA project's performance and impact. The Life of Project outputs agreed to by Fundación Neotrópica and USAID/Costa Rica (see USAID/Costa Rica, 1990) provided a set of indicators by which the Fundación's performance could be evaluated. Progress

towards these LOP outputs is evaluated in Section II (Findings) and Appendix B (LOP Outputs) of this report.

To define indicators of the BOSCOA project's impact, the evaluation team worked together with USAID/Costa Rica officials and BOSCOA staff to develop an evaluation matrix. Indicators of project impact were categorized according to their relevance to four types of project sustainability: social, economic, ecological, and political. Progress towards sustainability in all four areas will be necessary for BOSCOA to achieve its ambitious goal of successfully integrating forest conservation with economic development on the Osa Peninsula.

Four indicators of project impact in the area of social sustainability were defined:

- changes in attitudes on the part of the local people towards sustainable land use practices, forest conservation, and the value of BOSCOA's activities in their communities;
- increased local organizational development;
- increased local human resource development; and
- increased employment.

Two indicators of project impact in the area of economic sustainability were defined:

- a more diversified economy; and
- increased incomes.

Two indicators of project impact in the area of ecological sustainability were defined:

- fewer forests at risk (of deforestation); and
- improved land use.

The team decided that change in the rate of deforestation is not an appropriate indicator of project impact. Many of the forces driving deforestation on the Osa Peninsula are structural in nature and thus beyond the influence of BOSCOA.

Three indicators of project impact related to political sustainability were defined:

- changes in national policies and economic incentives;
- increased institutional cooperation; and
- changes in land tenure (i.e., more secure).

The team then gathered information to evaluate BOSCOA's impact in relation to these 11 indicators. This information was obtained primarily from BOSCOA staff, project beneficiaries, and visits to project sites by means of formal presentations, informal conversations, one-on-one interviews, and directed interviews with individuals and groups designated to fill particular information gaps. The team met with representatives of each of the ten grassroots groups targeted by BOSCOA as priorities for 1992. Findings based on the 11 indicators in the Evaluation Matrix are presented in Section II, Findings (see subsections A-D).

D. Project Constraints

BOSCOA operates under numerous constraints that make the project's goal, as stated above, more difficult to achieve. These constraints are briefly described below.

1. Social Constraints

The Osa Peninsula has a long history of social conflict, primarily the result of forced expropriation of land from local residents. In the 1960s, Osa Forest Products, Inc., a Chicago-

based company, obtained a 40,000 ha concession from the Costa Rican government. This concession, and all subsequent designations and proclamations regarding land use on the Osa, were carried out without regard to the existence of prior claims on the land by small-scale farmers. The conflict that resulted, which intensified throughout the 1960s and early 1970s, led to a land swap between Osa Forest Products and the government, and the creation of Corcovado National Park in 1975. Violent confrontations between farmers and Osa Forest Products personnel in 1977 and 1978 resulted in the cancellation of the concession Osa Forest Products had been granted in the land swap, and the subsequent creation of the Golfo Dulce Forest Reserve in 1978. The Guaymí Indian Reserve was created in 1981 and Corcovado was expanded in 1985. The current proposal to establish a "biological corridor" between the core area of Corcovado and the newly created Esquinas sector of the park would expand the park's boundaries once again. These successive government actions have served to create a strong dislike and mistrust of the Costa Rican government, in general, and the Park Service, in particular, on the part of the local people.

To further complicate matters, certain parts of the Peninsula, including areas within the park, were found to contain gold deposits. During the mid-to-late 1970s, mining pressures increased, and the large number of miners and use of heavy equipment seriously threatened the park's integrity. In 1986, MIRENEM expelled the miners working within the park, resettling many of them in the surrounding buffer zone. Some of these former miners are affiliated with the grassroots organizations with which BOSCOA is working.

Consequently, many of the current local residents on the Osa are truly "displaced people." In addition to the large population of ex-gold miners, most of whom had no experience with farming, many unemployed

workers poured onto the Peninsula when the extensive banana plantations around Palmar (north of the Osa) were closed down in the early 1980s. Thus, the population of the Osa is by no means a "typical" campesino population with strong ties to the land and a long history of farming. Indeed, even the Osa's oldest residents, the Guayml Indians, can be considered migrants as they have historically moved back and forth between the present-day countries of Costa Rica and Panama. All of these factors greatly complicate the social milieu within which BOSCOA must operate.

2. Economic Constraints

The remoteness of the Osa Peninsula, its distance from markets, lack of public services such as electricity or telephone, and a high rate of illiteracy among the local population impose serious constraints on the economic alternatives that BOSCOA can offer. The Osa is traditionally viewed as the "Siberia" of Costa Rica, and it is a formidable challenge to build a sustainable, diversified economy in a region where infrastructure is lacking and the indiscriminate mining of resources has heretofore provided the economic base. BOSCOA is currently working in the areas of forestry, agriculture, handicrafts and ecotourism; the productive potential of each of these economic alternatives is seriously impacted by these constraints.

3. Ecological Constraints

Given the high precipitation, generally poor soils and steep slopes that are described in Section I.A above, most of the Osa is inappropriate for conventional agriculture. The economic and subsistence alternatives that BOSCOA can offer under these conditions are limited. BOSCOA's emphasis on forestry, ecotourism, and the use of high cover, perennial crops in alternative agricultural systems is highly appropriate, given existing ecological constraints.

4. Legal/Political Constraints

There are two major legal/political constraints under which BOSCOA must operate: the lack of legal land tenure on the part of most residents on the Osa Peninsula, and the complex procedure by which forest management plans are approved and permits are issued.

When the Golfo Dulce Forest Reserve was established in 1978, it was partially superimposed on an area administered by the Institute for Agricultural Development (IDA). BOSCOA's activities are legally confined to the forests in this area of overlap, which make up approximately one-third of the forest reserve. The remaining two-thirds of the reserve, lying outside of IDA's jurisdiction is effectively "off limits" to BOSCOA activities and local residents are considered squatters. As such, they are unable to obtain the MIRENEM permits necessary for forest management unless they can prove occupancy for at least 10 years prior to the establishment of the Golfo Dulce Forest Reserve (i.e., before 1968). This legal constraint limits the forested area within which BOSCOA can work to about 13,000 ha. Figure 3 illustrates the area that BOSCOA can feasibly bring under improved management given current legal constraints ("feasible forests"). This situation has resulted in a fragmented forest landscape and insecure land tenure for the majority of local residents. Indeed, less than five percent of the Osa population has free and clear title to the land upon which they live.

Within this restricted area, the process by which BOSCOA helps residents and their organizations obtain permission to implement a forest management plan is complicated and time-consuming (see Figure 4). It is no wonder that when faced with this complicated process, a farmer's usual reaction is to sell the timber to loggers for a fraction of its real value. These loggers, who are contracted by the landowner to harvest timber, traditionally "high-grade" the forest, extracting the biggest and best trees with

little regard for the condition of the residual stand. Although the logger technically works for the landowner, it is the logger who dictates the terms of the "partnership," frequently drawing up fraudulent management plans or employing bribes to obtain the required cutting permits. Farmers receive payment based upon the amount of wood which is actually sold, not on the amount which is harvested, and this only after the logger has deducted his fee.

The legally sanctioned timber harvest on the Osa (which represents only a portion of the total timber harvested) has increased more than 50 percent over the last four years (see Figure 5, Authorized DGF Harvesting Permits, 1988-91). This dramatic increase is at least partially attributable to two factors: the infamous "B5" harvesting permits, and road improvements in the Osa. In 1988, under intense pressure from the local labor union SIPRAICO, DGF began to issue makeshift harvest permits entitling farmers to cut ten trees per family. Local farmers quickly proceeded to divide their landholdings among their children in order to obtain multiple permits. Simultaneously, the U.S. Embassy donated several bridges to the Costa Rican Government which were installed by U.S. National Guardsmen over several treacherous river crossings on the Peninsula that previously acted as natural barriers to loggers. The situation is further exacerbated by lack of a congruent forest policy, inadequate monitoring of harvesting permits, and little control of logging operations. In fact, 1992 timber harvest figures for the Osa show yet another incremental increase, despite the discontinuation of the "B5" harvesting permits. BOSCOA staff estimate that "legal" harvesting alone is responsible for the deforestation of approximately 2,400 ha/year on the Osa.

Figure 4: Costa Rican Forestry Permitting Process

LEGAL DOCUMENTS REQUIRED TO MANAGE FOREST (all expire in 3 months).

- Owner contracts Technical Assistance.
- Contract development between cooperativa and associates.
- Each associate with land to be managed obtains IDA certificate or land title.
- Cooperative obtains Municipal approval to use roads.
- Associates authorize cooperative manager to process all administration details.

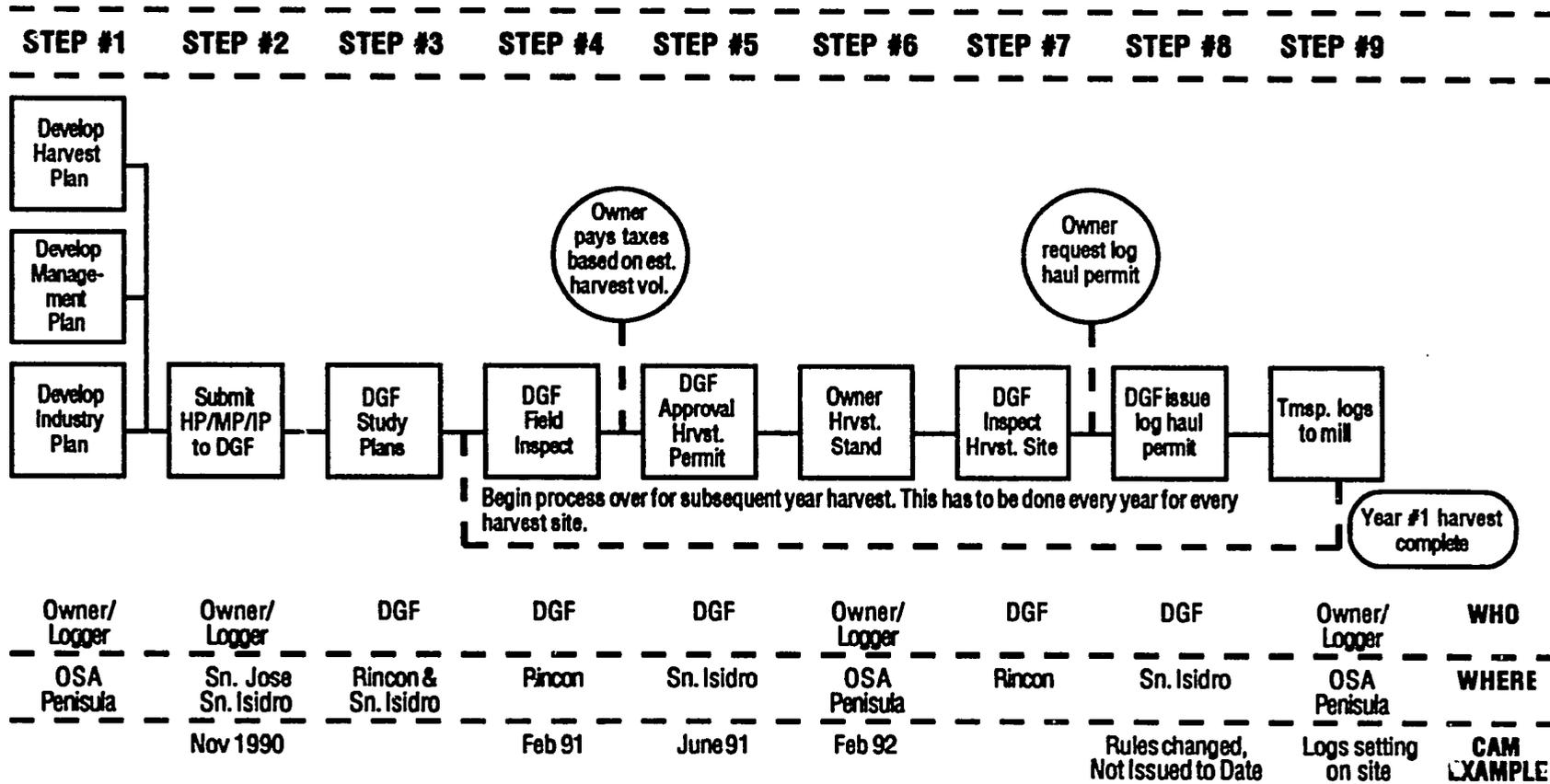
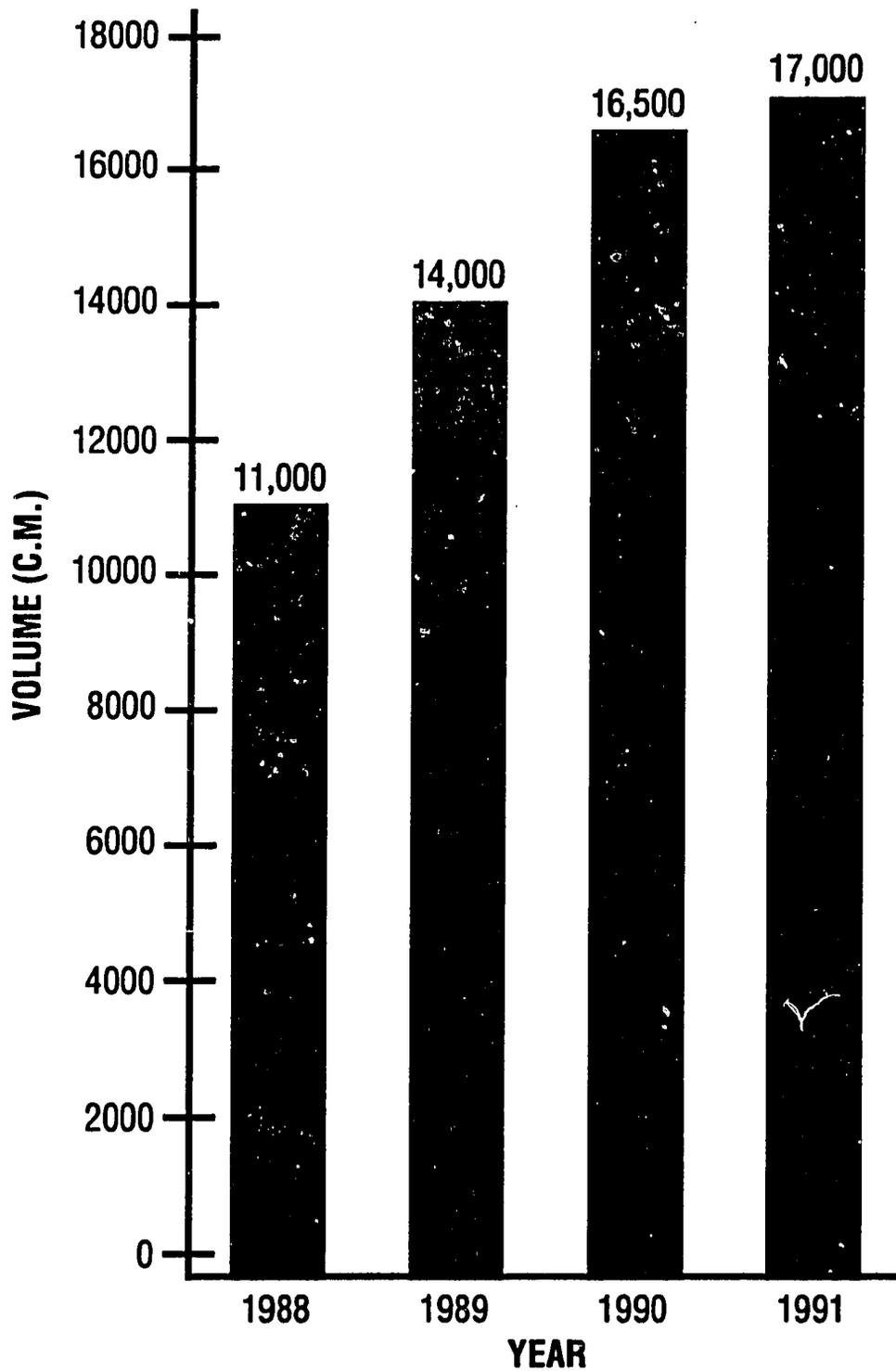


Figure 5: DGF Authorized Timber Harvest for the Osa Peninsula, 1988-1991



Source: José Joaquín Campos, 1991 and personal communication.

II. FINDINGS

The team observed the most positive impacts of BOSCOSA's work to be in the areas of social and ecological sustainability. No significant impact was noted in the areas of economic and political sustainability. Table 3, BOSCOSA Evaluation Matrix, summarizes the results of the team's evaluation of the project's impact according to the 11 indicators selected. These findings are described in detail in subsections A-D. This is followed by the team's analysis of BOSCOSA's institutional sustainability which was evaluated apart from the matrix.

A. Social Sustainability

1) Indicator 1: Changes in Attitudes (+ impact)

Most local people interviewed expressed a positive attitude towards the BOSCOSA project

and its staff's performance. Likewise, they demonstrated a good understanding of forest conservation concepts. Obviously, BOSCOSA has effectively communicated its message to local inhabitants. Indeed, many local people praised BOSCOSA, emphasizing that "no one else has responded to our needs." BOSCOSA staff are their friends. Perhaps the best example found by the team was the Guaymí Indians, who consciously chose BOSCOSA and CEDARENA, rather than CONAI, to be their advisor and legal counsel in the process of establishing their formal organization and securing title to their customary lands. The BOSCOSA - SIPRAICO conflict offers another insight to changes in local attitudes about forest conservation (see Box 1, Conservation versus Development: The BOSCOSA-SIPRAICO Conflict). BOSCOSA's activities in cultural and organizational promotion, administrative training, handicrafts, forestry and the FIPROSA trust fund have been instrumental in bringing about these attitudinal changes favoring forest conservation and management.

Table 3: BOSCOSA Evaluation Matrix

Criteria	Indicator	Impact
Social Sustainability	<ul style="list-style-type: none"> - Change in attitudes - Increased organizational development - Increased human resources - Increased employment 	<ul style="list-style-type: none"> + + + +
Economic Sustainability	<ul style="list-style-type: none"> - More diversified economy - Increased income levels 	<ul style="list-style-type: none"> 0 0
Ecological Sustainability	<ul style="list-style-type: none"> - Fewer forests at risk - Improved land-use 	<ul style="list-style-type: none"> + +
Political Sustainability	<ul style="list-style-type: none"> - Change in policy - Increased institutional cooperation - Change in land tenure 	<ul style="list-style-type: none"> 0 + 0

Box 1: Conservation versus Development: The BOSCONA-SIPRAICO Conflict

In 1990, SIPRAICO, a syndicate of the Osa's independent agricultural producers, gave BOSCONA staff 48 hours to get out of town, "or we won't be responsible for the consequences."

There were eight men present at the June 1992 SIPRAICO board meeting we attended, less than two years after the giving of the ultimatum. The syndicate still has 50 dues-paying members, and can call upon 350 more from throughout the Peninsula to support actions in times of crisis.

SIPRAICO fights for the rights of campesinos against any design to deprive them of their land or restrict their activities on it. In the Osa Peninsula, this mandate has kept them busy. They have rallied to protest the expropriation of farmers' land, and the removal of gold miners, from Corcovado National Park, the expulsion of farmers from lands ceded to Osa Forest Products, restrictions on logging imposed by the Forestry Department, and the expansion of the Corcovado National Park. They are currently challenging the constitutionality of the existence of the Golfo Dulce Forest Reserve in the Costa Rican courts, arguing on the basis of the constitutional guarantee of the inalienability of private property.

In mid-1990, this largest, angriest grassroots organization on the Osa Peninsula also saw BOSCONA as their enemy.

"We didn't know who they were or why they were here. They walked into our farms without permission. They talked about conservation just like the government. When they interfered with a proposal SIPRAICO put in for funding of a sawmill operation, we knew they were our enemy."

— Manuel Villalobos Arguedas
SIPRAICO Board Member

Doubts linger in some minds concerning BOSCONA's true interests: campesinos are notoriously — and justifiably — skeptical. But BOSCONA's resolve in 1990 to hold its ground, reassess and reform its approach to the syndicate, wait out the crisis and continue to seek dialogue with SIPRAICO members individually and collectively, has gradually paved the way for cooperation between the two organizations.

"We were scared. Some of us had our families here, and we feared for their safety. Beyond that, we felt we had failed: we set out to help the campesinos find ways to improve their livelihoods, and they saw us as their enemy. We spent months talking and reflecting and analyzing our motivations and our strategies among ourselves — well, we've never stopped doing that. This is work that required constant reflection and self-evaluation. We survived the crisis because we took this attitude and developed the habit of open dialogue, and it has made us stronger."

— José Joaquín Campos
Director, BOSCONA

Today, BOSCONA's forestry technicians are working on a Forest Management Plan with twelve SIPRAICO members; several others from the syndicate will come into the plan next year. BOSCONA is assisting SIPRAICO's board to prepare proposals for funding of several new projects. The board treasurer is being trained in accounting in preparation for the arrival of the grant funds. And two young SIPRAICO members will complete a year's training as paraforesters in July 1992.

"Attitudes towards BOSCONA have changed a lot. People are opening up to new ideas little by little. As a paraforester, I hope I'll be able to get a lot more SIPRAICO members incorporated into Forest Management Plans. If we can make these plans a benefit, not such a burden, people will cooperate.

The main thing is communication. When the people don't know what's going on, they always think the worst. So BOSCONA should be giving them information constantly, before they even ask for it.

But look around you and you will see the result of BOSCONA's work: there is less cutting, less burning. Anyone can see that."

— Carlos Jarquín G.
SIPRAICO Paraforester

Table 4: Grassroots Organization Membership (6/92)

Group	Total # of Members	# of Active Members
Coopeagromuebles	89	48
ASOPRAQ	60	30
ARLEQUIN	27	27
SIPRAICO	350 **	50 (dues paying)
AACB	16	14
ADESCAB	24	17
ASOFEP	17	17
R.I. Guaymí	15 **	15 **
APROFISA	20	20
ASGUACA	14	14
COOPEMARTI	14	14
ASOPROSA*	-	2
TOTAL 12	646	274

- Only on the level of an agricultural proposal in conjunction with other organizations in the zone.
- ** Families, not individual members.

However some people remain skeptical, even suspicious, of BOSCOA's motives. They fear the project is another government attempt to expand the borders of Corcovado National Park, further restrict land use, and even expropriate their land. The lack of economic benefits generated by BOSCOA thus far leaves local people doubtful about the economic potential of forest conservation activities. On several occasions, local farmers expressed frustration and even resentment about the lack of accountability of BOSCOA to local groups. "It doesn't matter if the crops they recommended to me don't produce," commented one unconvinced farmer, "the BOSCOA technician drives home in his new truck to a full plate; I walk home to a hungry family."

2) Indicator 2: Organizational Development of Grassroots Groups (+ impact)

BOSCOA has been the driving force behind organizational development among the Osa communities. Training offered by the project has benefited ten grassroots organizations, building sorely needed skills in accounting, administration, grantship, legal counsel, organization and strategic planning. These groups encompass over 600 members, a number which represents a significant portion of the Osa Peninsula population (see Table 4, Grassroots Organization Membership). Eight of these grassroots organizations were formed as a direct result of BOSCOA's assistance; two groups, the Guaymí and ASOFEP, represent the traditionally marginalized interests of indigenous peoples and rural women, respectively.

BOSCOSA has also been extremely effective at leveraging financial assistance from a variety of national and international sources. Since 1988, BOSCOSA has assisted grassroots organizations to develop some 41 proposals, capturing close to US \$1 million which has been channeled to 11 groups (see Table 5, Financial Resources Obtained by Grassroots Organizations, 1989-92). Another nine proposals for an additional US \$81,000 are in various stages of negotiation with interested donors.

BOSCOSA is an important catalyst for local groups, providing critical assistance to grassroots organizations in analyzing information, setting priorities and developing platforms from which to negotiate with government and donor institutions. More importantly, the establishment and strengthening of these grassroots organizations forms an important base of local human resources upon which the success of BOSCOSA, and any future community-based forest conservation and management efforts on the Osa Peninsula, ultimately depend.

Despite these impressive and important gains, none of the grassroots organizations with which BOSCOSA works appear to be self-sufficient in providing the services required by their members to sustainably manage their natural resources. This is not surprising, given the groups' relatively brief histories and recent introduction to natural resource management activities. Although the groups are well aware of the importance of self-reliance, it is unclear how many of them would continue to exist if BOSCOSA were to disappear tomorrow.

3) Indicator 3: Increased Human Resources Development (+ impact)

BOSCOSA has had a significant impact on developing human resources on the Osa Peninsula. Some 72 women and 107 men have received training in organizational development,

accounting, administration, handicrafts, cultural arts, and forestry since the project's inception (see Table 6, Training Provided by BOSCOSA to Grassroots Organizations). In handicrafts alone, over 80 training events have been conducted. A shining example of human resource development is the group of young men currently enrolled in the paraforester training program (see Box 2, Building Human Capital: The Paraforesters).

Perhaps the best measure of BOSCOSA's impact on the development of human resources is broader participation in community decision making and the emergence of new leaders. "I've watched youngsters who were nobodies become somebodies through their association with BOSCOSA," commented Dofia Dinora Alpizar during our meeting with ASOPRAQ in the Rancho Quemado community center, "Now we have more people ready and willing to lead our community."

4) Indicator 4: Increased Employment (+ impact)

The team identified 56 jobs created as a direct result of BOSCOSA activities. The majority were created through joint ventures between grassroots organizations and BOSCOSA in handicrafts, wood processing (saw-milling and carpentry) and tree nurseries. Many jobs appear to be economically viable, such as the CAM commercial tree nursery and the Guaymí handicrafts venture. These should continue to provide local employment beyond BOSCOSA's existence. A limited number of jobs also resulted from the direct hiring of local environmental educators, paraforesters and project support staff. These jobs provide valuable experience and skills that should facilitate local employees' prospects for future employment.

Several other activities have the potential to generate more employment, such as handicrafts and agro-industry; however, their

Table 5: Financial Resources Obtained by Grassroots Organizations, 1989-92

Recipient	Activity	Amount ¹	Donor	Year
Coopeagromuebles	Tree Nursery	US\$ 8,071	Netherlands Embassy	1989 & 91
	Tree Nursery	200	CRAG	1991
	Reforestation	170,771	FDF	1989-92
	Forest-based Industry	85,813	IAF	1990
	Handicrafts	669	IMAS	1991
	Forest Management	28,976	MIRENEM	1991
ASOPRAQ	Agr. Production (peach palm)	27,789	CRS	1989
	Reforestation	36,945	FDF	1989-92
	Sawmill	4,600	CRS	1990
	Handicrafts	1,000	RA	1992
	Forest Management	30,460	MIRENEM	1992
	Forest-based Industry	15,800	ACOSA	1992
Guaymi	Land Purchase	3,700	CRAG	1990
	Land Purchase	5,000	CEA	1991
	Land Purchase	10,000	Regenwald	1991
	Handicraft School	5,000	ITF (Holland)	1991
	Handicrafts	311	Voz del Indio	1991
	School	5,000	CEA	1991
	Environmental Education	2,500	CEA	1992
APROFISA	Ag. production (peach palm/soursop)	17,778	CRS	1988
	Ag. Machinery	1,200	CRS	1990
	Reforestation	7,308	FDF	1992
	Sawing Machines	670	IMAS	1990
AACB	Handicrafts	1,000	CRAG	1990
	Land Purchase	8,000	Regenwald	1990
	Ecotourism	2,000	Regenwald	1990
ASGUACA	Agroindustry (soursop)	9,831	CRS	1992
		42,300	Fed. CAC	1992
Grupo Arlequin	General Support	200	Regenwald	1990
	Land Purchase	17,300	Regenwald	1990-92
COOPMARTI	Agroforestry Nursery	4,167	Netherlands Embassy	1989-91
Rancho Quemado	Food Aid	1,940	FAO-CNP	1991-92
Gallardo	Food Aid	1,077	FAO-CNP	1991-92
Rio Oro	Food Aid	6,680	FAO-CNP	1991-92
FIPROSA Trust Fund	Loan Guarantees	51,500	CRS	1992
	Loan Guarantees	35,000	WWF	1992
	Fiscal Incentives	300,000	CAPE	1992
TOTAL	17	\$950,941	18	4

¹ Includes funds that have been pledged, partially disbursed and offered.

BOSCOSA's support to grassroots organizations to capture these funds has ranged from passive assistance to conceptualizing, drafting and negotiating the various proposals.

Table 6: Training Provided by BOSCOA to Grassroots Organizations

Organization	Training Provided	Trainees		Total Trainees
		Women	Men	
AACB	Paraforestry Organization Workshop Accounting Arts and Crafts	- - - 6	1 4 1 -	12
ADESCAB	Administration and Organization Workshop Accounting Arts and Crafts	3 - 9	7 1 -	20
APROFISA	Administration and Organization Workshop Accounting Paraforestry	2 - -	11 1 1	15
ASGUACA	Administration and Organization Workshop Accounting Paraforestry	3 1 -	8 2 1	15
ASOFEP	Organization Workshop Accounting Arts and Crafts	7 1 17	- - -	25
ASOPRAQ	Paraforestry Administration and Organization Workshop Accounting Arts and Crafts	- 3 - 7	2 11 2 3	28
COOPEAGROMUEBLES	Administration and Organization Workshop Accounting Arts and Crafts Paraforestry	1 - 3 -	10 4 5 2	25
COOPEMARTI	Paraforestry	-	1	1
GUAYMÍ	Organization Workshop Accounting Arts and Crafts Paraforestry	1 - 8 -	20 1 4 1	35
SIPRAICO	Accounting Paraforestry	- -	1 2	3
TOTAL		72	107	179

Box 2: Building Human Capital: The Paraforesters

They don't wear badges or uniforms; they are more likely to be found in rubber boots and t-shirts. The youngest is 17; the oldest in his 60s. They are Osa Peninsula residents and small farmers. Their mission: to help their communities better manage their forest resources.

Since June 1991, 12 "paraforesters" have been taking part in an intensive training course designed by BOSCOA to transform small farmers with no previous experience into community-based forest technicians and forest stewards. Each grassroots group with which BOSCOA works was asked to select the individuals who would participate in the course and become paraforesters for their communities. The trainees are acutely aware of their responsibilities. One paraforester put it this way:

"It makes me a little nervous to have been chosen by my friends and neighbors to represent them and receive this training on their behalf. I really want to be able to give back to them the benefits that they expect and deserve."

The paraforesters meet as a group for formal classroom and field exercises twice a month for 3-4 days at a time. Gilberto Mendoza Rojas, who walked 10 hours in the mud from his community on the northern side of the Peninsula to attend the session held at Centro BOSCOA while the evaluation team was there, smiled when asked about his trip. "It wasn't so bad. And anyway, as I was walking I was thinking about what I had learned so far, and I knew it was worth the effort." For another week each month, each paraforester is expected to work on an individual project that each community has identified as a priority. Seventeen-year old Nelson Brenes of COOPEMARTI is running a native-species nursery that will provide the seedlings to reforest 25 hectares held by the agricultural cooperative. Santiago Murillo and Carlos Jarquin from SIPRAICO are conducting forest inventories and land-use studies for their organization's members in order to decide how best to manage small woodlots.

Charlie Walkinshaw, a training consultant for World Wildlife Fund who worked with BOSCOA to develop the paraforester course, says, "The advantage of this program is that you are putting the power of decision-making into the communities so that they can control their own resources. The underlying current is self-determination." As the paraforesters complete their training and return to their communities to serve as extensionists and sources of technical know-how, the success of this approach should become manifest. "The campesinos of the Osa need to see results," said one paraforester, "and hopefully, we'll be the ones to show them."

success will depend upon the quality of the product and the development of elusive markets. The planned environmental education center, Centro Juvenil Tropical, could also significantly bolster local employment opportunities, depending on hiring patterns.

B. Economic Sustainability

1) Indicator 1: More Diversified Economy (0 impact)

The team was unable to detect a measurable difference in the Osa economy attributable to the BOSCOA project. The FIPROSA incentives program and the Guaymí handicrafts venture are exceptions to the general

lack of impact in this area. While BOSCOA is promoting a myriad of land use alternatives — such as forest management, perennial cash crops, ecotourism and handicrafts — most remain unproven. They have yet to impact the regional economy. Given the short life of this project, and its emphasis on self-reliance, these findings are not unexpected. Should these alternatives prove successful, however, they have the potential to diversify the local economy.

2) Indicator 2: Increased Incomes (0 impact)

The five families involved in the Guaymí Indians' handicrafts venture and the 13 recipients of the first disbursement from the FIPROSA trust fund were the only examples of increased incomes confirmed by the team.

Farmers inscribed under the FIPROSA program — though limited in number — receive 58 colones/ha; this is comparable to the annual income expected from soursop (guanábana) production. While the agricultural and forestry alternatives promoted by BOSCOA appear promising, they are not currently increasing household incomes on the Osa in a significant way.

brought under improved management by local communities with BOSCOA assistance (see Table 7, Improved Land-Use Categories and Figure 3, What Forests Can BOSCOA Save?). The risk of these forests being converted to agricultural use is much lower than those forests where communities cannot establish legal occupancy and BOSCOA is not lending technical assistance.

C. Ecological Sustainability

1) Indicator 1: Fewer Forests at Risk (+ impact)

Within the area of "feasible" forest — the approximately 13,000 ha where BOSCOA can effectively operate — 38 percent has been

For privately owned forests with productive potential, the team found convincing evidence that forestry practices under management plans supported and supervised by BOSCOA are a quantum improvement over conventional logging operations, in terms of environmental impact, resource utilization, and silvicultural treatment. Although the team heard reports of less responsible harvesting

Table 7: Improved Land-Use Categories

Category	# HA	# HA (92) **	Organization
Natural Forest Management	1,567	650 ha	ASOPRAQ, CAM, SIPRAICO
Conservation Incentives	234	270	ADESCB
Indigenous Land Mgmt.	2,713		Guaymí Indian Reserve
Ecotourism Conces	458		AACB
Children's Rainforest	100		ASOPRAQ (Arlequin)
Reforestation	290 *		ASOPRAQ, APROFISA, CAM, MARTI, SIPRAICO
Improved Agriculture	157		Same as above
TOTAL	5,519	+ 920 =	6,439 ha

Note: * includes tree plantations and agricultural lands outside forests.

** projected total by end of 1992.

Box 3: The Greening of Juan Marin

Juan Marin used to make his living cutting trees. Now he is a "parataxonomist," a local expert helping national and international botanists to learn more about the flora of the Osa.

When we met him, he was trying out a new Wood Mizer sawmill. As a member of ASOPRAQ and its sawmill committee, Juan will oversee the sawmill operations that will enable ASOPRAQ to earn a portion of the profits historically siphoned off from Osa communities by "outside" lumber companies.

A few days later we saw Juan at a meeting where ASOPRAQ members shared their points of view about BOSCOSA's work in Rancho Quemado. Listening to some of his neighbors complain and criticize ("No one has made any money from BOSCOSA projects"...."The BOSCOSA technicians come and go so fast — we hardly know them. How can we have confidence in them?"..."BOSCOSA spends millions of colones on its cars and its salaries, but what do we get from it?"), Juan interjected his own view. Words didn't come easily to him, but he got his ideas across: "Be a little patient; we're just beginning....Our main problem is all we do is argue among ourselves....We have at least two things already that we never would have gotten without BOSCOSA's help: the sawmill and the Children's Rainforest."

Lanky, unkempt and fortyish, Juan doesn't look the part of a leader of a children's group. Yet he is president of the Arlequin Environmentalist Association, most of whose members are youngsters and adolescents.

When we walked with him into the 95-hectare forest recently purchased by Arlequin for conservation, we saw him as the children must see him: a man in love with the woods. Words flowed effortlessly as Juan eagerly told us what he knows best and cares about most: the flora of the Osa. Years of working alongside international botanists have added technical knowledge to Juan's store of experience; he points out endemic species by their scientific names and gives a spontaneous lecture on their ecology. Most of all, he says, he's happy to know these things to be able to share them with the children.

"I didn't grow up appreciating the forest — none of us did in those days. But these children now, they can learn while they're still young. We have to give them a chance to learn to appreciate the forest and protect it. That is our only hope for the future here."

under BOSCOSA supervision, it was obvious that BOSCOSA has the capacity to do exemplary work. While this is a significant accomplishment, the larger challenge is to continuously set the example on every site harvested under BOSCOSA supervision.

For privately owned forests which should be managed for watershed protection, BOSCOSA has helped the Rancho Quemado community obtain the funds needed to purchase 100 ha of steeply sloping forested land for conservation purposes. This "Children's Rainforest" will be managed by a group of children and adults, the Arlequin Environmental Association (see Box 3, The Greening of Juan Marin). For publicly-owned forests, the tenure work being carried out by BOSCOSA with CEDARENA under the Plan de Ordenamiento

Territorial will potentially allow management of an additional 20,000 ha within the Golfo Dulce Forest Reserve through community forest concessions.²

However, the process required to obtain government approval and permits for implementing management plans is overly cumbersome, punitive in nature, and impedes rather than promotes sustainable management of the Osa forests. It is much easier to obtain government support, technical assistance and capital for agricultural activities than for forest management activities on the same lands. The required documentation, advance tax payments, multiple bureaucratic procedures and constant revisions³ to the DGF permit system are beyond the capabilities of most local farmers to maneuver (unless they can employ political

Box 4: Improving Land-Use: The Case of Bernardo Gamboa

Bernardo Gamboa's parents brought him to the Osa from San Isidro del General as a young boy 17 years ago. Now he has a son of 6 and his own 19-hectare farm near La Palma.

Bernardo and another member of Coopeagromuebles, one of the grassroots organizations receiving technical assistance from BOSCOA, manage the group's tree nursery. School children, including Bernardo's own son, sometimes help out.

Constructed in 1989 with funds from the Embassy of the Netherlands, the nursery produces some 50,000 seedlings annually. Of the 15 species available, 13 are native to the Osa Peninsula. Bernardo and his co-worker charge buyers 12 colones per tree. Of this they give two colones to Coopeagromuebles; the rest pays their salaries and operating expenses.

Bernardo talks about how his work in the nursery has changed his own land-use practices:

"When I started to work here, I didn't know anything about planting trees. I got all my training from the BOSCOA technicians; they taught me everything I know, and I still rely on them for advice. They're the only ones who are helping people out here.

When I started working here, I didn't really believe in the idea of reforestation. I had just bought a farm; actually I had just cut down about 6 hectares of forest on my land. I cut it and burned it. That's what campesinos have been doing for generations.

But after a few months working in the nursery, I realized I really liked planting trees. I started thinking maybe I'd plant some trees myself, on the land I had just cleared. My co-worker here thought I was crazy, but I went ahead with it anyway. I planted 3 hectares.

It was a lot of work, and a few weeks after we finally got done with it my mother sent out a peon to chop down all the little trees! I stopped the man and I explained to my mother: Mother — I said — if you and Dad had planted trees when I was a boy, we'd be rich people today, not scratching out a living. I'm going to plant trees so my son will have them. It will be better than leaving him money in the bank.

The trees all grew well, and the government reforestation incentives cover most of the costs, so the next year I reforested 6 hectares more. By then my co-worker was convinced, so he started reforesting his farm, too. Even my mother is convinced — at least she hasn't sent out anyone to chop the trees down again!"

muscle or *mordidas*). Coupled with the land tenure impasse, the permit process creates a dependency of local farmers upon loggers as their only hope for obtaining the permits. This relationship sustains the continued mismanagement of the Osa forests. As long as local people are held hostage in this labyrinth, it will be extremely difficult for BOSCOA to make natural forest management profitable for local farmers, and to compete with loggers who regularly employ graft to circumvent the permit process. This problem is unnecessarily exacerbated by the fact that BOSCOA foresters have yet to obtain the certification required to validate the DGF cutting and hauling permits.

2) Indicator 2: Improved Land Use (+ impact)

Some 290 ha of degraded pasture lands have been reforested and close to 160 ha are under improved agricultural use by landowners belonging to grassroots organizations receiving technical assistance from BOSCOA (see Table 7, *Improved Land-Use Categories*). The project emphasizes the use of native species in reforestation activities, which has gained considerable acceptance by local people (see Box 4, *Improving Land-Use: The Case of Bernardo Gamboa*). The agricultural alternatives promoted by BOSCOA emphasize perennial crops and annuals that provide good ground cover. However, while more environmentally

sound than traditional crops, most non-traditional alternatives have yet to prove themselves economically viable.⁴

D. Political Sustainability

1) Indicator 1: Changes in Policy and Economic Incentives (0 impact)

The FIPROSA trust fund and the Cerro Brujo Community Forest concession arranged with MIRENEM were the only significant structural changes detected that provide incentives for forest conservation (see Box 5, Making Forest Conservation Pay: The FIPROSA Fund). FIPROSA, an innovative fiscal incentive program, however, lowers the risk of forest conversion for only five to eight years. Once a farmer fulfills his contractual agreement, FIPROSA incentives will have to be replaced with a self-sustaining and income-generating activity if it is to have a lasting impact on forest conservation. Obtaining the communal forest concession for Cerro Brujo marks a promising precedent for securing tenure rights for forest conservation activities by local communities previously considered to be squatters. Several procedural changes were also noted among the government agencies active on the Osa. Many now tolerate — or even solicit — local input to decision making. The approval of the CAM forest management plan also marks an important precedent for community control of forests traditionally exploited for the benefit of independent loggers.

2) Indicator 2: Increased Institutional Cooperation (+ impact)

BOSCOSA has served as a “bridge” among the various government bodies with jurisdictional responsibility on the Osa Peninsula, and has formed an effective coalition of groups and interests working towards a common goal. Their successful approach is

based upon informal collaboration around specific tasks that resolve common needs of the local representatives from the different agencies. This strategy laid the foundation for the formal constitution of ACOSA, in which BOSCOSA played a key role. BOSCOSA operates as a “ladder” between grassroots organizations and the Government, providing a conduit for local voices to reach agencies such as MIRENEM and CONAI. This has resulted in unprecedented governmental support for local grassroots organizations on the Osa. Likewise, BOSCOSA has brokered support from other NGOs (CEDARENA, INBio), donor agencies and commercial banks (FIPROSA) to advance local interests.

Information generated by the BOSCOSA project has also influenced government decision-making on conservation priorities, development strategies and land tenure. Examples of this are the Golfo Dulce Forest Reserve Management Plan, the OSA 2000 strategy and the Rapid Ecological Assessment. The forthcoming forest tenure work by BOSCOSA — with support from CEDARENA — and the results of Golfo Dulce Forest Reserve Land-Use Classification study may have even greater impact on government policies.

3) Indicator 3: Changes in Land Tenure (0 impact)

BOSCOSA has had little success in breaking the political deadlock over the insecure and fragmented land tenure situation on the Osa Peninsula. However, it has obtained more secure occupancy rights in several instances for local farmers and communities, such as the gold miner community of Cerro Brujo. The issuance of IDA's certificates of occupancy and the DGF's approval of the local groups' forest management plan lend legitimacy to local claims to property and access rights. As mentioned above, the BOSCOSA/CEDARENA tenure proposal — if endorsed by the government — could

Box 5: Making Forest Conservation Pay: The FIPROSA Fund

The creation of national parks often means that local residents are denied access to resources upon which they depend. In their eyes, conservation simply does not pay. The innovative trust developed for small and medium farmers of the Osa Peninsula, known by its Spanish acronym "FIPROSA," changes all that.

"The FIPROSA Trust provides not only [fiscal] incentives, but also access to soft credits under-utilized in our country, through loan guarantees," explains the BOSCOSA project manager, José Joaquín Campos.

The Trust is composed of two distinct funds, PROAVAL and PROINFOR. The PROAVAL fund provides collateral and/or subsidizes interest rates so that local farmers can qualify for bank loans. The PROINFOR incentives program provides income to local farmers who undertake forest conservation, management, and restoration activities. The Trust is managed by a special committee composed of BOSCOSA and ACOSA's executive directors, Fundación Neotrópica's administrative director and the chairperson of CRACOSA, (an elected representative of local producer organizations). The PROAVAL fund was initially capitalized with US \$70,000 donated by WWF and CRS. The PROINFOR fund was recently capitalized with a US \$300,000 donation from CAPE. Another US \$128,000 in capital, to be divided between the two funds, is forthcoming from the Swiss development agency, SIDA.

José Joaquín explains the rationale behind the PROINFOR incentives program: "Since its inception, we contemplated the incentives to fulfill the following objectives:

"to buy time to help us develop sustainable alternatives without the pressure of meeting [immediate] campesino needs;

"to favor the development of activities which generate income while ensuring the sustainability of the process, including sustainable forest management, reforestation, ecotourism and even sustainable agriculture;

"to promote a change in attitude towards sustainable development through training and environmental education; and

"to allow the community certain independence, or financial stability, through savings that build from its own investment fund."

The incentives work as follows. Farmers receive US \$15 for each hectare of forest, up to a limit of 20 hectares, that they inscribe under the PROINFOR program upon signing a conservation easement. A community trust fund is then established in the amount of US \$300 for each hectare that its members enroll in the program. Farmers receive the interest earned on the trust fund according to their contribution, half as an annual lump sum payment and half as an annual deposit in an escrow account established in the farmer's name. The escrow is intended to build equity to leverage future funding for productive activities once the incentives expire.

After five years, the easement is evaluated by the farmer, the community organization, and BOSCOSA to decide whether it should be discontinued or extended for another three years. During the sixth through ninth years of the easement, three-quarters of the interest generated from the trust fund is paid to the farmer as income and the remaining quarter is invested in the farmer's escrow account. Once the easement expires, the PROINFOR program will be transferred to other communities and their residents who live on the margins of the Corcovado National Park. Farmers who graduate from the PROINFOR program are expected to invest their newly acquired capital in productive activities that do not degrade the forest.

"FIPROSA is a pilot initiative striving to contribute to new mechanisms for the sustainable use of natural forests, while at the same time benefiting local communities," stresses José Joaquín; "We've already programmed an intensive evaluation five years into the program, and we'll be appreciative of any feedback regarding it."

FIPROSA represents the sort of new thinking that is desperately needed to ensure the well-being of forests and the people who depend on them. One can only hope that the development assistance community sees that the time is ripe for such innovations — and backs their further evolution. Perhaps then conservation can pay for farmers beyond the Osa Peninsula, too.

significantly enhance tenurial rights and management possibilities within the Golfo Dulce Forest Reserve. Such a legal precedent would have major implications for "public" forest management across the country.

E. Institutional Sustainability

Figure 6 depicts BOSCOSA's current organizational structure. Table 8 shows BOSCOSA's operational makeup for managing day-to-day activities and project areas. This matrix was designed by BOSCOSA to facilitate vertical and horizontal communication within the organization and to integrate various programmatic activities at the community level. BOSCOSA's organizational structure resulted from a January 1992 reorganization effort initiated by the project staff, largely in response to recommendations made by the first AID evaluation (see Irvine, et al., 1989). Staff expressed general satisfaction with improvements resulting from these changes in BOSCOSA's internal structure and operational organization.

The team found the 80-cell operational matrix, which identifies eight programs working with ten grassroots organizations, to be unwieldy. Programs which manage productive activities (forestry, agriculture, and others) are given the same status as support programs that provide training, manage information, offer legal services, etc. Such a horizontal structure is not conducive to setting priorities and focussing BOSCOSA's limited resources on those areas most critical to achieving its goals.

The team was pleased and impressed to find a systematic approach to self-questioning and improvement employed by the BOSCOSA staff, both individually and as an institution. This approach insures that all experiences, whether successes or failures, will contribute to BOSCOSA's continued growth and ability to meet new challenges.

The energy, idealism and commitment of BOSCOSA's staff are great advantages to the project. However, the team found that professional development needs to be given higher priority to equip BOSCOSA's youthful staff to carry out their functions.

BOSCOSA's director, José Joaquín Campos, manages the organization with a participatory style that is appropriate and effective. His earnest search for excellence in all areas of BOSCOSA's work sets a fine example for his staff. He is a great asset to the organization; the team highly commends his contribution.

Figure 6: BOSCOA Organizational Structure

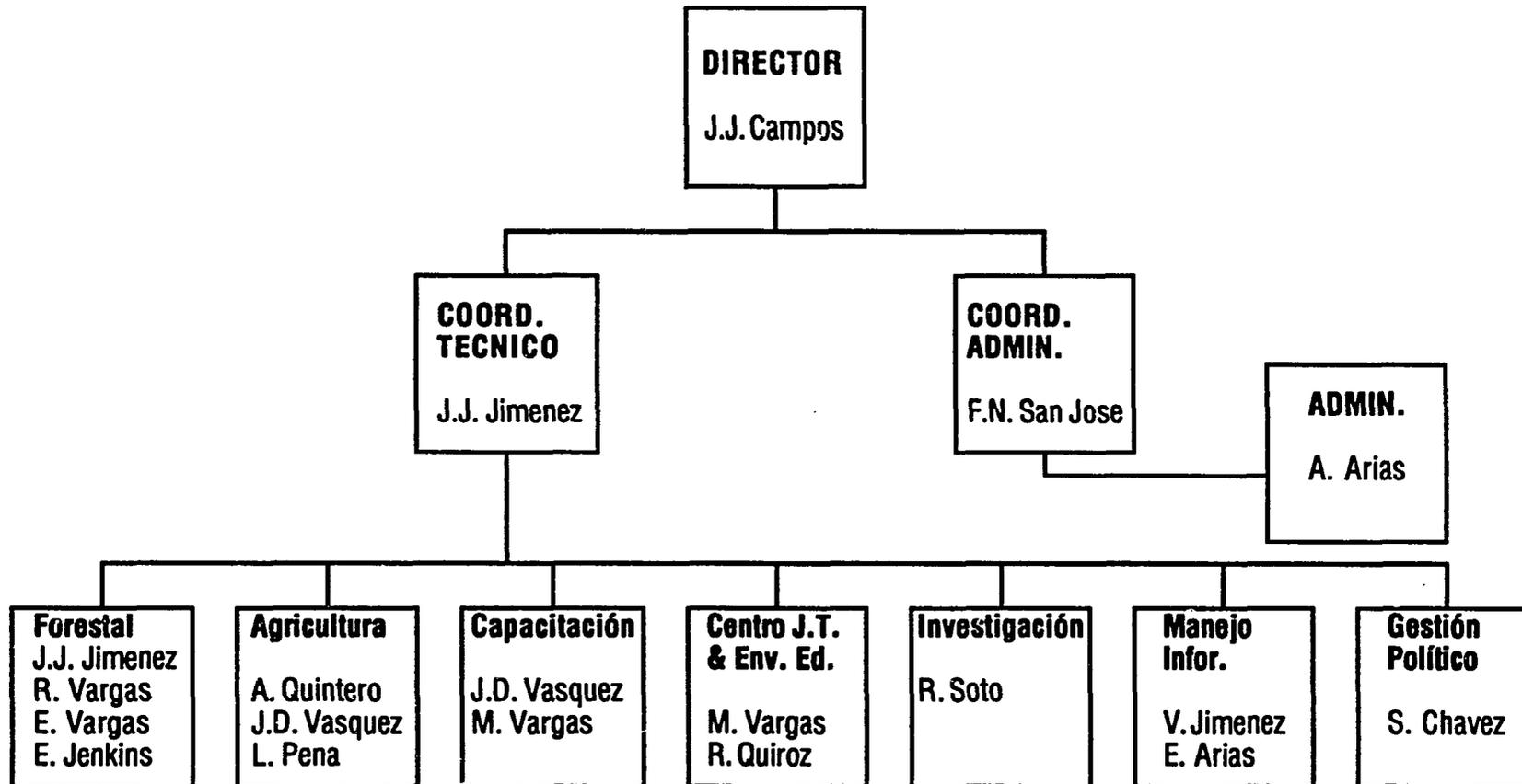


Table 8: BOSCOA Operational Matrix

Project Areas ↗ ↘ Grassroots Organizations	Forestry	Agriculture	Training	Environmental Education	Research	Ecotourism	Information Management	Legal
CAM	X	X	X		X		X	X
ASOPRAQ	X	X	X		X		X	X
SIPRAICO	X		X				X	X
AACB	X		X				X	X
Guaymí			X				X	X
ADESCAB	X		X				X	X
APROFISA	X	X	X		X		X	
ASGUACA		X	X		X		X	
COOPEMARTI	X	X	X				X	
ASOFEP			X				X	

X = BOSCOA program areas conducting activities with each grassroots organization.

Note: One program area staff member is responsible for liaison between each grassroots organization and other BOSCOA program staff. There are ten such liaison persons, one for each organization.

III. EVALUATION RECOMMENDATIONS

The following recommendations are based on the team's analysis of BOSCOA's progress toward achieving sustainability in the four areas included in the evaluation matrix (A through D below) and in the area of institutional sustainability (E below).

A. Social Recommendations

Organizational Development

1. *Provide more follow-up to BOSCOA's formal activities (training events and technical assistance) by giving "quality time" to grassroots organizations, especially to the neediest groups.*

Despite impressive accomplishments and responsiveness to local needs, BOSCOA will continue to be considered by many as a potential threat until proven otherwise. This can only be avoided by keeping in tune with local needs and providing economically and environmentally viable alternatives to current production systems. Meeting local people on their terms will require visiting their homes, adjusting to their time frame and learning their values. This represents a significant time commitment beyond BOSCOA's formal activities.

Most of the grassroots organizations that BOSCOA interacts with are young, inexperienced and fragile. Expectations are high, especially among the women of ASOFEP and the Guaymí Indians, for whom BOSCOA is the only source of institutional support. Staff are well aware of the importance of continuing to motivate and support these groups without creating dependency. Even when the needs and

interests of these groups appear to fall outside of BOSCOA's mandate, it is important for BOSCOA to maintain its supporting role. To fail these groups would deal a severe blow to local morale and popular support for BOSCOA.

2. *Design mechanisms to assure accountability of BOSCOA's technicians to grassroots organizations.*

It is essential that local groups have explicit mechanisms with which to resolve differences when they arise, and also assure them of BOSCOA's responsiveness to their needs. The use of liaison staff assigned to each grassroots organization is a useful measure in this regard. This could be further strengthened by establishing explicit dispute resolution methods and periodic evaluation procedures with each group to assess project as well as staff performance.

3. *Continue to deepen and broaden community participation in all BOSCOA's planning and programming.*

While BOSCOA has done a good job at facilitating community participation in local and regional planning, this needs to be intensified at various levels, i.e., information sharing, consultation, decision making, and formulation of action plans.

BOSCOA must distinguish when community participation is not necessary or desirable, such as for decisions that are clearly internal. If such decisions ultimately affect the services provided to local groups or the terms of their relationship with BOSCOA, groups should be advised in good faith as soon as possible.

4. *Improve communication to grassroots organizations about all of BOSCOA's activities and facilitate networking among groups.*

This should be carried out in the appropriate format, be it wider distribution of BOSCOSA's periodic progress and evaluation reports, regular community meetings, or more informal debriefings with key local informants who will spread the word. BOSCOSA should avoid surprises. Information exchange among the various grassroots organizations should be facilitated as a means of disseminating lessons learned. By improving communication with local groups and informing them on a regular basis about what BOSCOSA is or is not doing as situations evolve, damaging misinformation, skepticism and rumors can be minimized.

Training

5. Focus on developing local leaders and trainers, emphasizing areas that will best help people manage their grassroots organizations, meet food production needs and generate incomes. BOSCOSA should assist trainees in finding employment and promoting the use of their skills.

The paraforester approach to promoting natural forest management should be employed within all of BOSCOSA's program areas. Transferring technology and provision of services to local people will considerably magnify the development of local human resources on the Osa Peninsula and BOSCOSA's outreach capability. Over time, these trainees should assume the task of delivering services to local communities that are currently provided by BOSCOSA technicians. While there will always be a role for external technical assistance — especially with highly technical services such as natural forest management — local persons should be used to the greatest extent possible. In the interim, the paraforesters and environmental education trainees should play an important role as guides and resource persons for visiting groups. Opportunities to use their services should be programmed into the operations of the future Centro Juvenil Tropical.

6. Establish a staff development plan to continue building BOSCOSA's capacity to conduct training for local people.

A plan for staff training should be developed to ensure that staff are equipped with the appropriate tools and skills necessary to effectively transfer technologies and train local people. This is an immediate need with the environmental education program.

7. BOSCOSA should develop a workshop/training module for all technical staff concerning methodologies for working with grassroots organizations.

The intention here is to bring the concept of "self-reliance" (*auto-gestión*) into clear focus and define a methodology to promote it effectively. As a first step, BOSCOSA technicians should become familiar with such participatory methodologies as Participatory Action Research and Participatory Rural Appraisal, and learn how to adapt these techniques to their particular needs and the Osa's unique setting (see Box 6, Guiding Principles for Working with Grassroots Organizations).

Environmental Education

8. Develop a program curriculum and methodology for taking environmental education to local communities. Environmental activities should target adults in grassroots organizations as well as children.

The environmental education program should develop a clear message and supporting materials which explicitly demonstrate the links between BOSCOSA's economic activities, training and support services, and forest conservation and management. After construction of the Centro Juvenil Tropical, extension activities should continue in the Osa communities; BOSCOSA should not depend

Box 6: Guiding Principles for Working with Grassroots Organizations

In the development of a workshop/training module (see recommendation # 7), the team would like to reaffirm and clarify three operational principles as a point of departure for BOSCOA technicians:

- i) Grassroots organizations must make their own decisions.

Members of these groups should understand that they are responsible for their own decisions and will be the ones to deal with the consequences; BOSCOA technicians are not similarly affected by the consequences of these decisions (nor should they be).

- ii) The role of BOSCOA technicians should be to help the grassroots groups build consensus, based on a careful gathering and analysis of all the relevant information available.

BOSCOA technicians and grassroots organizations together should gather information and analyze it before the group makes its decision. It is perfectly appropriate for technicians to provide alternative views and challenge popular perceptions during this process. If decisions are to lead to effective action, it is imperative that all relevant community interest groups participate in this process.

- iii) The goal of the consensus-building process should be to generate proposals based on consensus and to negotiate support from external institutions in order to meet local needs (e.g., with NGOs, government agencies, banks, donors, etc.).

solely on the Centro as the medium for delivering environmental education. Preference should be given to programs and mechanisms that will integrate and maximize contact between local grassroots organizations and outside groups who visit the Centro Juvenil Tropical.

It is imperative that the people of the Osa Peninsula see the Centro Juvenil Tropical as their facility. This will require that local groups feel that their needs are being served by the Centro facilities and staff, and that local organizations actively participate in decision making concerning the Centro's programs, priorities and use.

Demographic Information

9. *Conduct a survey to determine how many people live within the areas of "feasible forest" and forested lands within the Golfo Dulce Forest Reserve that are outside of IDA's jurisdiction.*

To design an effective strategy, accurate demographic data is needed on the numbers, distribution, tenurial situation and organizational arrangements of the inhabitants in and around the forested areas where BOSCOA can feasibly work.

B. Economic Recommendations

10. *BOSCOA and grassroots organizations should establish teams to conduct financial analysis and marketing studies of all economic activities being promoted by BOSCOA, as well as other economic activities of interest to local communities (e.g., tiquisque, pejibaye, arts and crafts, wood products, non-timber forest products, and ecotourism).*

Local participants need to understand the results of these studies and assume joint responsibility with BOSCOA for their success. For example, with the forest management activities, does the goal of achieving 25 percent local processing of timber harvests make economic sense? Are logs beyond a certain size

limit better sold on the open market for veneer rather than quartered and sent through the portable sawmill for low-grade construction material? It is of utmost urgency for economic success that BOSCOSA determine the point of marginal returns for local wood and agro-industrial processing.

In addition to analyzing the productive activities already underway, BOSCOSA should further explore the harvesting and marketing of non-timber forest products as an economic alternative.

C. Ecological Recommendations

Forest Management

11. Basic silvicultural guidelines should be developed to ensure consistent application of sound silviculture practices. These guidelines should be reviewed periodically and revised as more experience is acquired and better information becomes available. Forestry staff should become more familiar with tropical silvicultural experience elsewhere in the humid tropics.

BOSCOSA foresters would benefit from more exposure to natural forest management experiences in humid tropical forests. For example, efforts should be made to obtain information, staff exchanges and/or training from the Caribbean National Forest in Puerto Rico, the CELOS system in Suriname, the Malaysian Uniform System and other well-studied forest management experiences. Guidelines need to be developed and implemented to minimize environmental impacts from road and skid trail construction as well as adequate spacing between residual crop tree and crown openings so that adequate regeneration of the desired timber species can be achieved. Application of basic and flexible rules — such as the “D plus D” rule developed for

thinning secondary tabanuco forests in Puerto Rico’s Luquillo Forest, and the guidelines issued by the various timber certification programs such as Rainforest Alliance’s “Smart Wood,” Scientific Certification Systems’ “Green Cross,” or the emerging Forest Stewardship Council’s “Standards” — will help improve the appropriateness and consistency of BOSCOSA’s current harvesting and silvicultural practices.

12. Strengthen cooperation through staff exchanges and other mechanisms with projects or organizations working on natural forest management.

BOSCOSA’s relationship and participation in the fledgling WWF network of community forestry initiatives in Latin America is an excellent start for building the staff’s capacity in natural forest management. BOSCOSA should contact CATIE concerning possible inclusion as a demonstration site in the USAID-funded RENARM project’s natural forest management component. Collaboration should also be increased with the ITCR harvesting study, so that its results can be translated into effective operational guidelines for BOSCOSA forestry projects.

13. Ecological monitoring on forest management impacts should be conducted through cooperative agreements with existing research entities.

BOSCOSA should not undertake research as a primary activity as this will divert limited time and resources which would be better employed on productive activities and providing services to local groups.

14. All eligible BOSCOSA foresters should obtain certification, as required by the Forestry Law, by registering with the Colegio de Ingenieros Agrónomos as soon as possible. This is critical for BOSCOSA’s ability to obtain required permits for forest management. At

least one registered forester should be stationed at the Centro BOSCOA during the harvesting season.

15. BOSCOA technicians should interpret the contents of the management plans for local farmers. This may be done verbally or by writing summaries in easily understood language, or by other appropriate means.

Forest Conservation

16. Continue to raise funds for the FIPROSA trust fund.

FIPROSA incentives should concentrate on forests of high biodiversity or watershed protection value, as identified by the Rapid Ecological Assessment and forthcoming Tropical Science Center corridor study.

Improved Land-Use

17. The agriculture program should expand its focus to include a more holistic Farming Systems Approach, to improve production of basic grains and small-scale livestock, as well as specialty cash crops.

BOSCOA technicians should become familiar with Farming Systems Approaches and participatory research techniques. These should be applied when assisting local farmers to develop farm management plans to integrate various alternatives. Equal emphasis should be placed on meeting both subsistence and cash needs. Training in these techniques and methodologies should be provided to BOSCOA staff as needed.

18. Integrated Pest Management practices and techniques should be incorporated as much as possible into the agriculture program.

BOSCOA technicians should become familiar with the techniques of Integrated Pest Management being promoted in Central America. Efforts should be made to obtain materials, staff exchanges or training from World Neighbors, CARE, CATIE, the Zamorano Agricultural School in Honduras, etc.

19. BOSCOA should provide technical assistance to develop farm management plans for small farmers and provide extension materials to local farmers describing the agricultural alternatives being promoted.

As in forest management, small farms can be managed better if the farmer has a management plan. Technical assistance should focus on how conservation techniques and improved management activities can help local farmers meet their needs. These plans should be for two to three years. Such plans should prove beneficial to BOSCOA's goal of forest conservation, as they can help gain farmer confidence and demonstrate the practical benefits of longer-term multifaceted forest management plans.

D. Political Recommendations

20. Continue close coordination with government agencies, but maintain autonomy.

BOSCOA's effective relationship with MIRENEM has been a mixed blessing. On the one hand, this has improved decentralization, coordination and accountability of the highly centralized government agencies responsible for resource management on the Osa Peninsula (DGF, SPN, IDA, DGM). On the other hand, the close association between BOSCOA and MIRENEM arouses suspicion in local people. They wonder if BOSCOA is an independent, autonomous entity and a friend — or just another tool of the government to expropriate their land. If BOSCOA is to build and

maintain credibility among local groups, it must maintain its autonomy while lobbying various government agencies and shepherding projects through their bureaucracies.

21. Vigorously pursue the Forest Land Tenure Program (i.e., Plan de Ordenamiento Territorial) as a management option within the Forest Reserve, in close cooperation with the affected communities, CEDARENA and MIRENEM.

Success with this initiative will double the amount of forest that can be potentially brought under management by local groups. This will significantly reduce the risk of these forests being converted to agricultural use. It will also establish an important legal precedent and open up tremendous opportunities for the management of other federal forest lands in Costa Rica.

22. Present an alternative arrangement and request exemption from the current DGF permit process required for forest management activities.

BOSCOSA should initiate negotiations with MIRENEM for a tripartite cooperative agreement between MIRENEM, Fundación Neotrópica and the grassroots organizations managing forest lands, to simplify the permit process. This alternative should be based on legal precedents established by private sector agreements such as those employed by the Stone Container Corporation, Puerto Carrillo Teak project, PORTICO, etc. Acceptance of a more "user friendly" permit process will be a good test of MIRENEM's commitment to sustainable forest conservation and management on the Osa Peninsula. Failure to accomplish this will seriously sour the appeal of natural forest management activities for local groups.

23. BOSCOSA staff should immediately prepare to negotiate with MIRENEM and

ACOSA concerning the geographical location and size of the Osa Biological Corridor, using information from the Rapid Ecological Assessment and the Forest Reserve Management Plan.

A considerable portion of the Golfo Dulce Forest Reserve is being proposed for inclusion in the Corcovado "biological corridor." The area in question lies almost entirely within the area where BOSCOSA can feasibly operate. If the current proposal is adopted, establishment of the corridor could lead to more expropriations of local residents. This would severely constrain BOSCOSA's activities, bringing an abrupt end to community-based forest conservation and management efforts on the Osa Peninsula. Before the corridor is established, BOSCOSA should provide MIRENEM with the following information: How many people live in areas proposed by MIRENEM for absolute protection? What is the land tenure situation? What is the price tag for buying out the local people? What percentage of the proposed corridor still has forest cover? What is the relative biological importance of the areas proposed for protection? And what alternatives to "absolute protection" does BOSCOSA advocate?

BOSCOSA should communicate to MIRENEM the amount of funds secured to date by BOSCOSA for biodiversity protection under the FIPROSA trust fund, the Children's Rainforest in Rancho Quemado and the Cerro Brujo Community Forest. If these areas are included in the corridor, they should be recognized as appropriate land-use under community management. BOSCOSA should monitor biodiversity in these areas in order to demonstrate that community-based conservation efforts can be as effective as the "absolute protection" advocated by MIRENEM in conserving biological diversity.

E. Institutional Recommendations

24. *BOSCOSA should emphasize the economically productive activities which help to meet the subsistence and cash needs of local people. All other programs should be defined based on the services and support required by these productive activities (see Figure 7, Diagram of Suggested Program Priorities).*

The team recommends that BOSCOSA place priority on those programs dealing with the sustainable management of natural resources. These programs currently include:

- A. Sustainable agriculture;
- B. Sustainable forestry and wood processing; and
- C. The FIPROSA Trust, handicrafts, ecotourism and other income producing ventures based on the sustainable use of forest resources -- such as the harvesting

and marketing of non-timber forest products.

The allocation of financial resources, staffing and use of physical facilities should reflect these priorities. However, as particular projects prove themselves viable and local needs evolve, the emphasis BOSCOSA places on various activities should be realigned accordingly. The practice of assigning a coordinator to each grassroots organization should be continued.

BOSCOSA may also want to consider modifying its operational structure to complement any reallocation of program priorities. Under the current structure (see Figure 6), one person, the Technical Coordinator, is responsible for all eight programs. This extremely horizontal structure makes coordination of efforts between programs difficult. Instead, the evaluation team proposes that the two major types of activities be separated, as in Figure 8. In this proposed

Figure 7: Diagram of Suggested Program Priorities

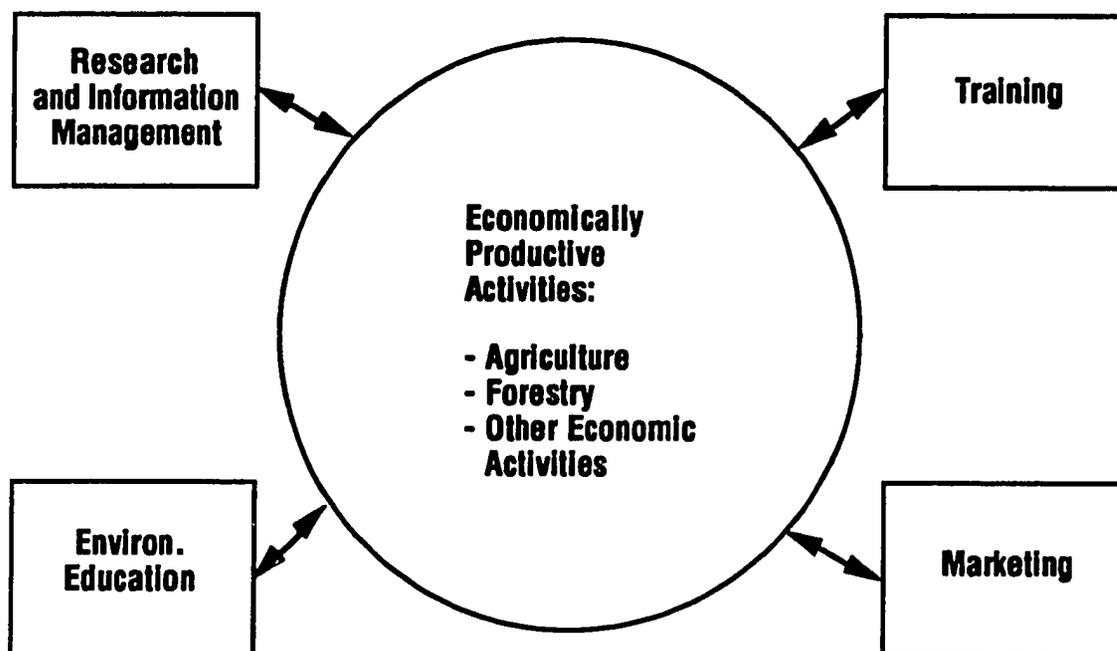
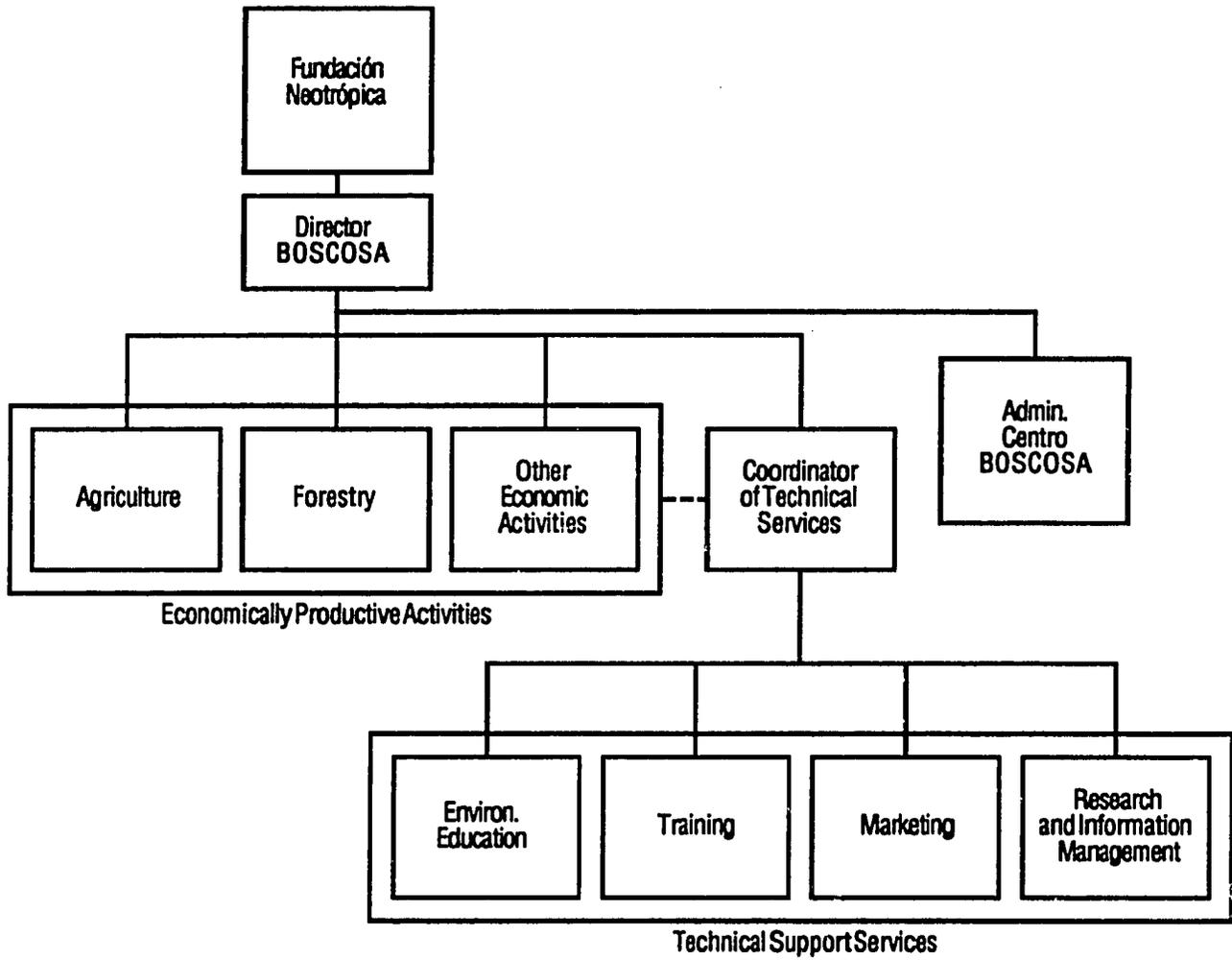


Figure 8: Proposed BOSCOSA Organizational Structure



organizational structure, staff working on Economically Productive Activities report to the BOSCOA Director, while the Technical Support Services staff report to a Coordinator of Technical Services. This Coordinator should serve as the liaison between his/her divisions and the Economically Productive Activities. In this way, he (or she) can ensure that the technical support activities are responsive to the needs of the activities dealing with economic production. The evaluation team also recommends that one new staff position be created for "marketing services." The suggested approach will allow BOSCOA to concentrate on the most critical project components, and to resist the temptation to overextend its limited resources.

25. BOSCOA should develop an operational and management plan to govern current and future use of the Centro BOSCOA's physical facilities. Priority should be given to uses that support BOSCOA's productive activities and other activities which serve the needs of local communities.

As the demand grows for use of the BOSCOA facilities, BOSCOA should decide now on the priorities for internal demand among its varying programs, and how much time and space should be devoted to serve external demands (e.g., visiting researchers, student groups, etc.). Failure to define a clear plan for using the Centro's facilities will quickly lead to an unmanageable situation.

26. BOSCOA's information management system should be designed for explicit purposes and be guided by discerning criteria for data acquisition. The system should be simple, and provide local resource managers information in an accessible format on a timely basis to better manage the various productive activities promoted by BOSCOA.

The various components of BOSCOA's information management system should be

designed as they are needed. Each component should be functionally independent. The entire information management system does not need to be built all at once. The team recommends a modest start by collecting only the essential data necessary for required reporting, subjected to unsophisticated processing and analysis. Information generated by BOSCOA should be packaged for local managers and decision makers in an accessible format, as it is required. This process will be facilitated enormously by employing a standardized format, a questionnaire designed for data collection, and maintaining compatibility among the system's various software and hardware components. The system must not become technologically driven or scientifically skewed; management information requirements are far simpler and easier to accomplish than a manager's desire for scientific information which may not be necessary for making management decisions.

F. Final Conclusions

Overall, the team is extremely impressed with BOSCOA's accomplishments over a relatively short time and despite several challenging obstacles. Although BOSCOA has yet to prove itself in a number of areas, the team feels strongly that it has great potential to demonstrate natural resource management and development techniques that can be replicated at the local, national and international levels. Continued progress toward BOSCOA's goal of integrating forest conservation and economic development will directly support USAID/Costa Rica's Natural Resources Management Strategy (December 1987) as well as A.I.D.'s Regional Environmental and Natural Resource Management Strategies for Central America (1989) and Latin America and the Caribbean (1992). The team strongly recommends that USAID/Costa Rica continue to provide general support to Fundación Neotrópica for implementation of the BOSCOA project.

Continued support from USAID/Costa Rica should enable the Fundación Neotrópica to move BOSCOA in three general directions over the next few years:

- 1) marketing analysis;
- 2) staff training in technical fields and participatory methodologies; and
- 3) development and improvement of the agricultural and forestry programs.

The team felt that improvement in these areas is most critical to achievement of the project's goals. It is imperative that the economic alternatives promoted by BOSCOA begin to pay off within the next two to three years; no amount of good intentions can replace the Osa residents' need for economic results.

We recommend that USAID/Costa Rica funding not be devoted to the environmental education program, as substantial funds have already been obtained from other sources, and BOSCOA is committed to developing the Centro Juvenil Tropical. The team felt that the legal and policy work being carried out by BOSCOA with assistance from CEDARENA is of utmost importance. The project's efforts in these areas should be maintained at the present level or expanded, if possible.

IV. ENDNOTES

1. The Tropical Science Center Land-Use Capability Classification System is used to determine the land-use capability of soils in Costa Rica. The system divides land into ten land-use categories for each of the eleven Holdridge Life Zones found in Costa Rica. The classification takes into account slope, texture, depth, pH, drainage, porosity, flooding potential, dry season length, wind, humidity and erosion potential. A classification of a particular land area using this system results in specific recommended uses. The range of land-use categories runs from Class I - high agricultural potential, high yields, few restrictions - to Class X lands which should only be managed for complete protection, with no productive use recommended.
2. A majority of the people living on lands within the Forest Reserve but beyond IDA's jurisdiction are unable to obtain a land title or certificate of occupancy, and thus are considered squatters. They have no access to the permits, loans and technical assistance required to undertake forest management and conservation initiatives. BOSCOA will have only limited success in these areas. It is estimated that half of the Forest Reserve in the area outside of IDA jurisdiction retains its forest cover; the other half has already been converted to agriculture.
3. A cursory analysis was conducted by the team and BOSCOA foresters of the proposed revision by DGF to the permit system that would require a 100 percent inventory. It was determined that this system would raise the preparation costs of a management plan to beyond the value of the timber to be harvested for the average farmer.
4. It can be argued that traditional crops, such as corn and beans, are also not economically viable. But unlike non-traditional crops, they form an important staple for the local diet.

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Appendix A: Evaluation Team Scope of Work (SOW)

Proposal from the Biodiversity Support Program to USAID/Costa Rica for technical assistance in assessing BOSCOA Project.

Objective

The Biodiversity Support Program (BSP) proposes that USAID/Costa Rica add on to the R&D/ENR Conservation of Biological Diversity Project (936-5554), cooperative agreement no. DHR-5554-A-00-8044-00, to support the ongoing activities of BSP, a consortium of World Wildlife Fund-U.S. (WWF-US), The Nature Conservancy (TNC), and the World Resources Institute (WRI). By this action, USAID/Costa Rica will support BSP's efforts to improve the capacities of A.I.D. assistance programs to conserve and wisely manage biological resources, through safeguarding ecological processes and maintaining the variety of genetic resources (Cooperative Agreement, page 1, paragraph 3).

Methods

BSP will provide technical assistance to USAID/Costa Rica in carrying out the final evaluation of the mission's BOSCOA project (Project No. 515-0255). This technical assistance will take the form of three team members who will carry out approximately 3 weeks of research, interviews, and site visits in Costa Rica.

This technical assistance is provided in accordance with the following sections of the technical assistance component of cooperative agreement no. DHR-5554-A-00-8044-00 (pages 9-11).

"Assistance shall be provided in the following areas...

- 1 (h) Policy studies to identify better and more effective methods to preserve biological diversity, including the monitoring and evaluation of current A.I.D. biological diversity conservation strategies and the effect of economic development activities.
- 2 (h) Rural development projects integrating conservation area maintenance and utilization with meeting local human and economic needs.
- 3 (b) Development of buffer zones for alternative sources of the products normally obtained in protected areas and of sustained harvesting and management of trade species from protected areas."

Following BSP's very positive mid-term evaluation completed in October 1991, and in response to a perceived need within the conservation community, BSP has developed a strategy to place increased emphasis on monitoring and evaluation. The need to extract and disseminate lessons learned from

projects and programs targeted at the conservation and wise use of natural resources, particularly integrated conservation and development projects, is a priority which BSP is superbly positioned to address. BSP's new strategic focus on critiquing and assessing various approaches to conservation, in combination with the cooperative agreement's goals and objectives as stated above, make participation in the BOSCOA evaluation a logical technical assistance activity for BSP.

Background

The objective of BOSCOA is to develop and demonstrate natural forest management, sustainable agriculture, ecotourism and biodiversity technologies which are economically productive and contribute towards the maintenance of forest cover. BOSCOA is being realized through a number of activities at both the regional and grassroots levels. Among the major activities are: a regional training/research center, protected areas planning and management, and local sustainable development.

BSP will determine BOSCOA's progress in achieving its stated purpose; identify relative strengths and weaknesses of BOSCOA's organization and methodological approaches; and provide USAID/Costa Rica with an analysis of how project implementation might be improved and how future USAID support to BOSCOA might be structured.

One of the most important steps in any evaluation process is to define appropriate indicators of progress that can be used to evaluate a project's performance and impact. By reviewing key project documentation, BSP will assist USAID/Costa Rica to define two sets of indicators: one to gauge project impact and one to gauge project performance. Possible impact indicators include: changes in the attitudes and behavior of the various individuals and interest groups living in the project area; changes in the policies and procedures of key public and private agencies having rights and responsibilities for natural resources in the project area; and changes in the rates of deforestation or reforestation or other land use changes in the project area. Possible performance indicators include: organizational structure of BOSCOA vis-a-vis its ability to effectively interact with community client groups, governmental institutions, other NGOs and donors; appropriateness of methodologies used by BOSCOA to conduct education, transfer technology, establish enterprises, and influence behavior of land owners in the project area; and appropriateness of the range and mix of technical services offered by BOSCOA.

After developing appropriate indicators, BSP will then undertake site visits in the field for the purpose of gathering the data required to quantify/address the indicators developed. This will involve interviews with the project director, key staff members, community leaders, government officials, and others knowledgeable about the natural resources of the Osa Peninsula. BSP will review project documentation, technical materials, any agreements made with community groups and individuals, and other descriptions of services provided by BOSCOA to assess whether the project's methods and technology fit the needs of the client groups. BSP will also visit selected land parcels and communities to assess the actual impact of the project on the target population and the area's natural resources.

Presentation of Conclusions

After having collected the field data, BSP will summarize and interpret these data to show the progress of BOSCOA in attaining the project's purposes. A synthesis and analysis of the data gathered will be presented to USAID/Costa Rica along with an analysis of how project implementation might be improved and how future USAID support to BOSCOA might be structured, before the evaluation team leaves Costa Rica.

An evaluation report based on the findings of the team will be submitted by BSP to USAID/Costa Rica before leaving Costa Rica. BSP will submit a final report to the Mission within 30 days of receiving Mission comments. The report shall be formatted as discussed with the Mission.

Team Members

BSP will provide this technical assistance to USAID/Costa Rica in the form of 3 team members, experienced with evaluation procedures and with working in Latin America, and possessing an appropriate mix of qualifications in the fields of natural resource management, community development, economics and forestry.

Budget

A budget for the proposed technical assistance is attached. Support is requested for two people for 24 days of staff time and related expenses, as well as in-country costs and travel and per diem for three people (the salary of one team member will be covered by BSP as an in-kind contribution).

Appendix B: Life-of-Project (LOP) Outputs

Planned LOP Outputs	Code * (L-Low) (M-Medium) (H-High)	Accomplishments To Date (JUNE 1992)
1. FOREST RESOURCE MANAGEMENT		
<i>Reforestation</i>		
• Emphasize native species in reforestation activities.	H	Completed (see Section II.C.2 on Improved Land-Use).
<i>Nurseries</i>		
• Develop small community nursery.	H	Completed, established by CoopMarti in 1991.
• Develop one commercially viable agro-forestry nursery at Coop Agromuebles.	H	Completed, established 1990.
<i>Natural Forest Management</i>		
• 400 ha demonstration NFM.	H	Completed, 1,540 ha established, above target.
• Involve campesinos in NFM planning.	M	Ongoing, but could improve.
• Improve management techniques.	M	Same as above, positive attitude in local community.
• 25% log harvest processed locally.	L	Have not achieved this objective; we recommend that AID remove this target. Economic analysis needed to see if this is desirable. May be better to ship logs outside Osa for processing.

* The evaluators assigned these rankings based on their assessment of BOSCOA's progress towards the LOP Outputs.

Planned LOP Outputs	Code (L-Low) (M-Medium) (H-High)	Accomplishments To Date (JUNE 1992)
2. LAND USE PLANNING AND MANAGEMENT		
<ul style="list-style-type: none"> • 10,000 ha forest land under improved management involving local groups. 	H	5,580 completed. This is very good over short project life. The original 10,000 ha is unrealistic and not obtainable.
<ul style="list-style-type: none"> • Complete analysis of forestry situation on Osa Peninsula. 	H	Completed August 1992, "Plan de Manejo y Desarrollo Reserva Forestal Golfo Dulce."
<ul style="list-style-type: none"> • Complete Strategy for Conservation and Development on the Osa Peninsula. 	H	DRAFT completed 1992, "Osa 2000 Report."
<ul style="list-style-type: none"> • Complete Management Plan for the Golfo Dulce Forest Reserve. 	H	Completed August 1992, Plan de Manejo RFGD.
<ul style="list-style-type: none"> • Develop SiNAC for Corcovado NP, RFGD, IDA lands (in conjunction with MIRENEM). 	H	Completed. ACOSA established 1989.
<ul style="list-style-type: none"> • Develop multi-disciplinary community land-use planning process for Cerro Brujo (determine land, productive capacity, land tenure, socioeconomic, agricultural, and forestry profiles). 	?	No data obtained on progress toward this objective.
<ul style="list-style-type: none"> • Demonstrate processes for local participation in regional and local planning for management of parks and forest reserves. 	M	Ongoing, local participation can be improved.

Planned LOP Outputs	Code (L-Low) (M-Medium) (H-High)	Accomplishments To Date (JUNE 1992)
3. TRAINING AND EXTENSION		
<i>Centro BOSCOA Development</i>		
<ul style="list-style-type: none"> Develop center for training, research & extension. 	H	<p>Completed, Centro BOSCOA opened in '91, expansion in progress.</p> <p>Plans developed and funds secured for construction of Centro Juvenil Tropical.</p> <p>Need good operational plan for current and future center use.</p>
<i>General</i>		
<ul style="list-style-type: none"> Train local persons. 	H	Ongoing. Several training courses underway.
4. SUSTAINABLE AGRICULTURE		
<ul style="list-style-type: none"> Evaluate, test and demonstrate ecologically appropriate alternatives on deforested lands suitable for agriculture (includes perennial crops, agro-forestry, IPM, local processing). 	M	Ongoing. More focus and markets needed.
5. ECOTOURISM		
<ul style="list-style-type: none"> Infrastructure development 	L	Very little yet developed.
<ul style="list-style-type: none"> Local participation (assist local communities to organize, obtain funds, TA, facilities, & design training). 	L	Ongoing, but too soon to have done much.
<ul style="list-style-type: none"> Assist MIRENEM (develop environmental control plan for tourism; determine visitor impact on protected areas, design infrastructure in/outside of Park. 	H	Continuous process. Staff works directly with ACOSA on this. Too early for results.

Planned LOP Outputs	Code (L-Low) (M-Medium) (H-High)	Accomplishments To Date (JUNE 1992)
6. BIODIVERSITY		
• Long-term field research projects.	H	Ongoing. Research being developed with local & foreign universities; BOSCOA should not undertake primary responsibility.
• Conduct concise analytical studies of protected areas.	?	No data obtained on progress toward this objective.
• Conduct Rapid Ecological Assessment.	H	Completed, August 1992.
7. ENVIRONMENTAL EDUCATION		
• Publish and execute regional environmental education program (cooperate with SPN, local schools, Peace Corps).	L	Not completed.
• Complete 4 slide programs.	L	Not completed, program needs more focus.
8. COMMUNITY DEVELOPMENT		
<i>Cooperativa AGROMUEBLES</i>	H	
• Facilitate organization, development of agricultural techniques and agro-forestry.		
<i>Cooperativa APROFISA</i>	M	
• Reforestation of 20 ha.		14 ha completed 1991.
• Plant 40 ha perennial crops.		36 ha completed 1990-91.
• NFM plan development.		Not completed.

Planned LOP Outputs	Code (L-Low) (M-Medium) (H-High)	Accomplishments To Date (JUNE 1992)
<p><i>Cooperativa ASGUACA</i></p> <ul style="list-style-type: none"> Commercialization of perennial crops. 	L	Perennial crops being produced, but they have no market. Hence, good crops spoil in fields.
<i>Cooperativa Rancho Quemado</i>	H	

9. FOREST ENTERPRISES

<ul style="list-style-type: none"> Establish 2 commercially viable forest-based enterprises. 	M	Ongoing. Portable sawmill @ CAM although not yet fully operational. Demonstrations conducted at other sites.
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Appendix C: Evaluation Itinerary

DATE	ACTIVITY
June 1	Team arrives in San José, Costa Rica.
June 2	USAID/CR briefing. Visit MIRENEM/DGF. Review background documents.
June 3	Team travels to Osa Peninsula & BOSCOA project office. Briefing with BOSCOA staff.
June 4	Meet with individual BOSCOA program managers. Bauer visits ITCR harvesting site.
June 5	Individual program meetings continued. Meet local participants in various programs. Interview and farm visit with Alberto Bermudez.
June 6	Visit Guaymí Indian Reserve. Discuss land tenure situation and alternatives with Silvia Chavez, CEDARENA.
June 7	Visit Rancho Quemado and conduct interviews re: handicrafts workshop, reforestation trials, Socorro Ureña's "demonstration plot" and Luis Aguilar's farming system with pejibaye & tisquisque. Community meeting with ASOPRAQ members.
June 8	Visit harvesting sites, sawmill, carpentry shop, tree nursery, reforestation trials and farmer's plantations under AGROMUEBLES forest management plan.
June 9	Team splits up to visit COPEMARTI, ASGUACA, APROFISA, ACOSA & SIPRAICO. Ecotourism briefing with Walter Rodriguez.
June 10	Meetings with Miguel Madrigal (ACOSA), Efraín Guzmán (IDA); visit ASOFEP and discuss RFGD management plan with Hugo Alvarez.
June 11	Meet with Paraforesters and Hugo Alvarez. Visit ADESCAB. Palmer meets with Gilberto Mendoza of AACB.
June 12	Palmer and Symington visit Arlequin Environmental Group, Rancho Quemado, and tour Children's Rainforest with Juan Marin and Rolando Altamirano. Meet with BOSCOA staff from Forestry program, and Ricardo Soto of research program re: Rapid Ecological Assessment.
June 13	Re-interview forestry program staff. Team departs Osa Peninsula for Golfito (to begin outlining report).
June 14	Overflight of Osa Peninsula; return to San José.
June 15	Present evaluation findings to USAID/CR and Mario Boza.
June 16	Present evaluation findings to Fundación Neotrópica.
June 19	End of Mission.

Appendix D: People Contacted

Name	Title	Affiliation
Mariano Martinez	President	Guaymí
Luis Quiros *	Vice President	
Nelson __	Secretary	
Jorge Mendoza	Treasurer	
Maria Mendoza	Vocal	
Luis Fernandez	Vocal	
Maximilian __	Vocal	
Junior __	Fiscal	
1 member, "Patronato"		
1 member, "Junta Educación"		
Teresa Salinas	Comité Artesanía	Guaymí
Antonia Dugri	C.A.	
Nena Caballero	C.A.	
Domitila Carrera	C.A.	
Marielena __	C.A.	
Carlos Gutierrez	President	ASOPRAQ
Juan Marin *	Vice-President	
Saul Marin		
Gilbert Padilla		
Alicia Marin*		
Dinora Alpizar		
Ivania Padilla*		
Licimar Marin		
Ismael Caravajal		
Jeremia Urena Granados		
Jesus Villalobos		
Ramon Barrantes		
Carlos Badilla		
Luis Aguilar *	Fiscal	
Socorro Urefia		
Manuel Villalobos *	President, Development Association	
Luis Chacon	Cooperative Manager	CAM
Bernardo Gamboa	Nursery Manager	
Juvenal Oviedo	President, Adm. Council	
Alberto Bermudez and Señora "Chanco Blanco"		
Eliecer Ortiz Garbanzo	Secretary General	SIPRAICO
Isidro Mona Amaya	Adjunct Secretary	
Manuel Villalobos A. *	Finance Committee	
Juan Jose Chavarria	Secretary	
Rene Mendoza M.	Organization Sec.	
Jose Joaquin Gonzalez	Alt., @ large	
Vidal Jimenez Caranza		
Manuel Aguilar		

Name	Title	Affiliation	
Juan Marin *	President	Grupo Arlequin	
Rolando Altamirano	Secretary		
Alicia Marin *	Treasurer		
Ivania Padilla	Env. Ed. trainee		
10 children	Theater group		
Miguel Madrigal	Director	ACOSA	
Luis Barquero	Sub-Director		
Santiago Murillo	Paraforester	SIPRAICO	
Carlos Jarquin	Paraforester	SIPRAICO	
Luis Aguilar *	Paraforester	ASOPRAQ	
Jesus Ibarra	Paraforester	ASOPRAQ	
Nelson Brenes *	Paraforester	COOPEMARTI	
Luis Quiros *	Paraforester	Guaymí	
Francisco Parra	Paraforester	APROFISA	
Ramon Barrios *	Paraforester	ASGUACA	
Gilberto Mendoza *	Paraforester	AACB	
Gilberto Mendoza *	Env. Ed. Teacher	AACB	
Nelson Brenes *	Nurseryman	COOPEMARTI	
Deisy Sanchez M.	President	ASOFEP	
Yamilse Santamaria G.	Vice President		
Jenney Vargas R.	Secretary		
Marjorie Gamboa V.	Treasurer		
Olga Mata V.			
Alba Villalta R.			
Elmira Mora M.			
Damaris Amador V.			
Margarita Nunez M.			
V. Jimenez			
Holly Christofferson	Peace Corps volunteer		
A. Quiros	President		ASGUACA
Sergio Umana	Vice President		
Marcial Espinosa	Treasurer		
Felicia Vargas	Secretary		
Julio Zuriaga	Fiscal		
Ramon Barrios	Vocal		
Carlos Jimenez Godinez	President	APROFISA	
Juan Romero Pena	President, Agriculture Committee		
Francisco Parra *	Paraforester		
Efrain Guzman	Regional Director	IDA	
Mario Boza	Vice Minister	MIRENEM	
Rolando Nunez	Assistant		

Name	Title	Affiliation
Ronald Vargas	National Director	DGF
Doug Tinsler	Acting Director	USAID/CR
Peter Kranstover	Acting Deputy Dir.	
Ginger Waddle	Program Officer	
Jaime Correa	Acting ADO	
Enrique Barrau	Natural Resources Officer	
Ann Lewandowski	Environmental Officer	

* Appear in contacts list more than once because they belong to more than one entity, e.g., ASOPRAQ and Arlequin.

Appendix E: Grassroots Organization Summaries

What follows below are "mini-evaluations" of BOSCOA's work with each of its 10 target grassroots organizations, based on the 11 impact indicators used for the project as a whole.

1. Asociación Ambientalista de Cerro Brujo (AACB)

<u>Impact</u>	<u>Performance</u>
I. SOCIAL SUSTAINABILITY	
1. Change in attitudes (+)	The Association has been successful in financing and executing several projects; members are optimistic and enthusiastic about future plans.
2. Increased Organizational Development (+)	<p>With BOSCOA's technical help, the Association has written grant proposals and received funding from various sources to: 1) purchase land for a Community Forest; 2) conduct environmental education in an elementary school; 3) purchase a canoe and outboard motor to take tourists to sites such as Isla de Caño and San Pedrillo (Corcovado National Park); and 4) construct an artisan workshop in Los Planes. They have recently submitted another proposal to build hostels and trails in the Community Forest.</p> <p>"BOSCOA has helped us a lot; now we are able to work independently, putting our training to good use."</p>
3. Increased Human Resources (+)	<ul style="list-style-type: none">• Gilberto Mendoza has been trained as a paraforester and environmental educator.• 9 people have received artisan workshops from Magda Vargas, (ongoing).• Board members received organizational training from Ana Lucia Solano.• 1 member received the accounting course.• Environmental educator receives support upon request from BOSCOA's environmental education staff.
4. Increased Employment Opportunities (+)	The environmental educator earns a part-time salary; he expects to receive financing through the Association for his work as a paraforester after completing the course.

Impact

Performance

II. ECONOMIC SUSTAINABILITY

1. More Diversified Economy (+)

Good potential for diversification in ecotourism, artisanry and improved agricultural practices.

2. Increased Income Levels (+)

- Paraforester/environmental educator salaried.
- Potential increase in incomes from ecotourism.

III. ECOLOGICAL SUSTAINABILITY

1. Fewer Forests at Risk (+)

450 hectares for conservation in Community Forest, under Resource Management Plan prepared by BOSCOA.

2. Improved Land Use (0)

IV. POLITICAL SUSTAINABILITY

1. Changes in policy (0)

2. Increased cooperation among institutions (+)

The legal mechanism of "concessions" was used to create the Community Forest, with cooperation between CEDARENA, the DGF and BOSCOA.

3. Changes in Land Tenure (+)

Creation of the 450-hectare Community Forest.

2. Asociación para el Desarrollo Sustentable y Conservación de la Cuenca Agua Buena (ADESCAB)

Impact

Performance

I. SOCIAL SUSTAINABILITY

1. Changes in Attitude (+)

Board members are optimistic that the incentive program will introduce participants to conservationist principles and practices, and that these will be sustained after the incentive period (5-8 years). They say it offers them an opportunity to develop a "savings mentality". They credit BOSCOSA with investing much time and care in the development of the program.

2. Increased Organizational Development (+)

Silvia Chavez (BOSCOSA/CEDARENA) helped the organization form (September, 1991) and acquire personeria juridica. Members have arranged to get a lot from IDA, where they want to build a club. They are looking for funds for construction. They expect the club will generate income for the Association. There is potential for organizational development through the process of managing the savings account, planning and investing in production projects. There are 21 members (13 men, 8 women) and 2 indirect members who are under-age. It is very early to predict how this group will function.

3. Increased Human Resources (+)

Board members have received organizational training from Ana Lucia Solano. 2 have taken the administration course and 1 is taking the accounting course. BOSCOSA is committed (by contract) to continue to provide administrative training to the group.

4. Increased Employment Opportunities (0)

II. ECONOMIC SUSTAINABILITY

1. More Diversified Economy (0)

2. Increased Income Levels (+)

13 Participants receive in the first year \$15/hectare for a maximum of 20 hectares under the incentive program. After that, they earn interest on an

Impact

Performance

investment of \$300 per hectare per year, split between the individuals and the organization (fondo de inversion). The contract is for 5 years, extendable up to a total of 8 years. Beneficiaries with 20 hectares enrolled will receive an average of \$580/year, distributed between themselves and an escrow account. At the conclusion of the contract, other members can be taken into the incentive program.

III. ECOLOGICAL SUSTAINABILITY

1. Fewer Forests at Risk (+)

234 hectares are currently enrolled in the incentive program; the goal is to reach 500 hectares during the first year.

2. Improved land use (+)

IV. POLITICAL SUSTAINABILITY

1. Changes in policy (+)

The FIPROSA Incentives Program, targeted to this group, is a very innovative conservation financing technique.

2. Increased cooperation among institutions (+)

IDA, private banks, Fundación Neotrópica, ACOSA are all contributing to the design and administration of the FIPROSA Trust.

3. Changes in Land Tenure (0)

3. Asociación de Productores de la Finca Sándalo (APROFISA)

<u>Impact</u>	<u>Performance</u>
I. SOCIAL SUSTAINABILITY	
1. Change in Attitudes (+)	Have a positive attitude; BOSCOA has been extremely helpful to them by providing TA and training when they were kicked out of Corcovado in 1987. No other institution could have filled this role. They only let people join who are determined to "make a go of it." They might prefer to be mining gold for the independence that it gives them, but they are willing to try agriculture.
2. Increased Organizational Development (+)	20 men and 10 women belong to APROFISA out of a community of 93 families. Group started 3 years ago, received <u>personería jurídica</u> less than two years ago, and have a bank account which they manage themselves. Obtained 1,600,000 colones from CRS for guanábana and pejibaye. "BOSCOA put order where there had been disorder."
3. Increased Human Resources (+)	<ul style="list-style-type: none">• Have received technical assistance on guanábana and pejibaye.• Have received organizational development training from Ana Lucia.• 1 person being trained as a paraforester.• 2 women participated in INA sewing course.
4. Increased Employment Opportunities (0)	<ul style="list-style-type: none">• Temporary employment for paraforester.
II. ECONOMIC SUSTAINABILITY	
1. More Diversified Economy (0)	<ul style="list-style-type: none">• Potential for good agricultural diversification.
2. Increased Income Levels (0)	<ul style="list-style-type: none">• Lost entire guanábana crop for lack of marketing, not making any money on this yet. Pejibaye still not producing.
III. ECOLOGICAL SUSTAINABILITY	
1. Fewer Forests at Risk (0)	950 ha total farm size; no forest being managed. Members may not have forest.

Impact

Performance

2. Improved Land-Use (+)

14 ha reforested (laurel, gmelina, amarillon), 36 ha in perennial tree crops.

IV. POLITICAL SUSTAINABILITY

1. Changes in Policy (0)

2. Increased Cooperation among Institutions (0)

3. Changes in Land Tenure (0)

4. Asociación de Guanabaneros de Cañaza (ASGUACA)

<u>Impact</u>	<u>Performance</u>
I. SOCIAL SUSTAINABILITY	
1. Change in Attitudes (+)	Seem to be very optimistic about the potential for increased income through guanábana production and tiquisque and are grateful for the technical assistance of BOSCOA in developing these productive alternatives. Not currently concerned about the lack of markets for these products, "production is the first step."
2. Increased Organizational Development (+)	<ul style="list-style-type: none">• Very good <u>auto-gestión</u>; not dependent upon BOSCOA.• Received a grant of 1,200,000 colones from CRS for maintenance of 25 ha of guanabanales.
3. Increased Human Resources (+)	<ul style="list-style-type: none">• Have received a lot of technical assistance on guanábana.• 1 person being trained as a paraforester.• Several in CRS training.• Have received organizational development training from Ana Lucia.
4. Increased Employment Opportunities (0)	<ul style="list-style-type: none">• Temporary employment for paraforester.
II. ECONOMIC SUSTAINABILITY	
1. More Diversified Economy (0)	<ul style="list-style-type: none">• Only 8 of the 13 socios have guanábana.
2. Increased Income Levels (0)	<ul style="list-style-type: none">• Lack markets for either guanábana or tiquisque.
III. ECOLOGICAL SUSTAINABILITY	
1. Fewer Forests at Risk (0)	No forest land in coop to speak of.
2. Improved Land-Use (+)	Organic farming practices, better land management which should increase guanábana yields.

Impact

Performance

IV. POLITICAL SUSTAINABILITY

1. Changes in Policy (0)

2. Increased Cooperation among
Institutions (small +)

Received a washer and juicer on loan from the
MAG which cannot be used since there is no
electricity.

3. Changes in Land Tenure (0)

5. Asociación Femenina de La Palma (ASOFEP)

Impact

Performance

I. SOCIAL SUSTAINABILITY

1. Change in Attitude (+)

The women say BOSCOA is the only regional institution that could or would help them organize to become economically productive. They are grateful for BOSCOA's organizational support and training, and they are conscious of their need for much more training. Their economic needs are great. They say they are united, and despite the many obstacles they face (lack of education, poverty, children at home, lack of spouse's support, lack of work experience outside the home), they will succeed in becoming artisans.

2. Increased Organizational Development (+)

BOSCOA's Ana Lucia Solano helped the women organize their group; Silvia Chavez helped them get personeria juridica, and Magda Vargas has given them artisan workshops. On their own, they acquired a lot from IDA where they hope to build a workplace and shop. They raise money with raffles and sales of Fundación Neotrópica arts and crafts. They have also asked for a grant from their legislative representative (partida especifica). With BOSCOA's help, they have submitted a proposal to build and equip a wood-working shop.

3. Increased Human Resources (+)

- 1 woman is taking the accounting course.
- 17 women participated in artisan workshops.
- 17 women participated in INA artisan course.

4. Increased Employment Opportunities (0)

These women have no job opportunities in a community that is experiencing high unemployment and out-migration. Some of their husbands, ex-goldminers, have left them and their children to seek employment in the expanding banana industry on the Atlantic coast. Monthly salaries for women who work in small local restaurants or stores are around \$50. The women are highly motivated to develop skills and earning power. They need lots of training and marketing advice to begin to make money.

Impact

Performance

II. ECONOMIC SUSTAINABILITY

1. More Diversified Economy (0)

Women are largely excluded from economic activities in most Osa communities. ASOFEP has the potential to bring women into the economy as producers, bringing benefits directly to women and children as well as to the community at large.

2. Increased Income Levels (0)

III. ECOLOGICAL SUSTAINABILITY

Not applicable

IV. POLITICAL SUSTAINABILITY

1. Changes in Policy (0)
2. Increased Cooperation among Institutions (0)
3. Changes in Land Tenure (0)

6. Asociación de Productores de Rancho Quemado (ASOPRAQ)

Impact

Performance

I. SOCIAL SUSTAINABILITY

1. Change in Attitude (- and +)

There is a range of attitudes toward BOSCOA. Suspicion remains strong, largely due to lack of financial success in agricultural projects. Some people complain of lack of attention and incompetence of technical staff because of perceived failures in projects (pigs, DGF sawmill demonstration, pejibaye). Others see BOSCOA as a valuable source of technical assistance and training, especially for the poorest people.

- "We want direct funding, no middleman."
- "We want short term economic benefits."
- "Technical staff should live in communities and be accountable to us."

Work in the children's environmental group "Arlequin" promises to develop positive attitudes and appreciation of the forest.

2. Increased Organizational Development (+)

BOSCOA helped create ASOPRAQ in 1989. Many members have received administrative training, although they still have trouble keeping the official books in order. There are many inactive members and 40 active members, among whom there is considerable internal conflict. BOSCOA can't solve these internal problems. It is a positive sign that the group continues to meet.

BOSCOA helped form the Crafts Committee (Comité de Artesanía) and then assisted the Committee in their application for a grant of \$1,000 for wood-working tools. Women are now writing their own proposal for funding of materials. BOSCOA continues to provide training.

Grupo Ambientalista "Arlequin:" BOSCOA's Environmental Education Director has dedicated one-third of his time to activities of this group. It

Impact

Performance

should begin to be more independent soon, as Ivania Padilla, a local 15-year-old, begins to assume the leadership role she has been trained for. The Impact Performance group has 12 adult members, 5 young people and 17 children, accounting for about 20% of the children in the Rancho Quemado school. Members are working with BOSCOA staff to write proposals to fund construction of a hostel and trails in the Children's Forest.

3. Increased Human Resources (+)

- 1 paraforester (Luis Aguilar).
- 1 environmental education assistant (Ivania Padilla).
- 3 men currently enrolled in accounting and administrative course.
- 6 men and 3 women working together in crafts (they need much more training to benefit economically, but they are becoming organized and motivated).
- 17 children, Arlequin theater group.

"Many more people are active in community organizations now than before BOSCOA."

4. Increased Employment (+)

- 1 paraforester.
- 1 environmental educator.

II. ECONOMIC SUSTAINABILITY

1. More Diversified Economy (0)

There is some agricultural diversification, with recent plantings of pejibaye (25 farmers) and reforestation (25 farmers), although economic results are yet to be seen.

2. Increased Income Levels (0)

Some farmers fear they may lose money if the pejibaye project fails. There is potential for value-added use of wood.

Impact

Performance

III. ECOLOGICAL SUSTAINABILITY

1. Fewer Forests at Risk (+)

The Arlequin group has bought 95 hectares for conservation, and intends to buy more.

2. Improved Land-Use (+)

- 1088 hectares under Forest Management Plan.
- 72 hectares reforested.

IV. POLITICAL SUSTAINABILITY

1. Changes in Policy (-)

People are very frustrated because policies regarding land titles have not changed, in spite of BOSCOSA's efforts.

2. Increased Cooperation among Institutions (0)

3. Changes in Land Tenure (0)

7. Cooperativa Cogestionaria de Productores Agroforestales e Industrial de la Peninsula de Osa (COOPEAGROMUEBLES)

<u>Impact</u>	<u>Performance</u>
I. SOCIAL SUSTAINABILITY	
1. Change in Attitudes (+)	There is optimism about the eventual economic success of projects. Cooperative members are grateful for technical assistance and organizational support from BOSCOSA staff.
2. Increased Organizational Development (+)	<p>The cooperative has been in existence since 1988; there are 58 members currently active, out of 88 total. BOSCOSA social development promoter, Ana Lucia Solano, conducts "dialogue" sessions for conflict resolution and organizational planning. These are viewed as very helpful in keeping the group working together.</p> <p>BOSCOSA staff helped Coopeagromuebles write grant proposals and acquire funding from the Inter-American Foundation (for purchase of a tractor, a sawmill, furniture-making tools and equipment), and from the Dutch Embassy to create a tree nursery. The funds are administered by the Cooperative (<u>auto-gestión</u>).</p> <p>Formation of women's group, ASOFEP.</p>
3. Increased Human Resources (+)	Many members have attended training courses. Four are currently taking the accounting course. Two members will participate in a 6-month wood-working course given by INA.
4. Increased Employment Opportunities (+)	<ul style="list-style-type: none">• 2 tree nursery managers (currently earning ten colones/seedling, approximately \$3,800/year) managing the nursery as their own business.• 10 men and 10 women salaried to work in furniture-making shop.• Coopeagromuebles hires, on a contract basis, local men to harvest timber.
II. ECONOMIC SUSTAINABILITY	
1. More Diversified Economy (+)	Reforestation; potential for income from wood-working; sawmill.

Impact

2. Increased Income Levels (+)

Performance

Members are paid more per tree by the Cooperative for timber harvesting.

III. ECOLOGICAL SUSTAINABILITY

1. Fewer Forests at Risk (+)

- 650 hectares under Forestry Management Plans.
- Timber harvesting by the Cooperative is less damaging to the forest than traditional work by independent loggers.
- The tree nursery is propagating 2 rare native species.

2. Improved Land Use (+)

- 200 hectares reforested.
- 650 hectares under Forest Management Plans.

IV. POLITICAL SUSTAINABILITY

1. Changes in Policy (0)

They are still having problems with the DGF with requests for permits. Two members became so frustrated waiting for action on the Coopeagromuebles Management Plan, that they sold their timber to independent loggers and were expelled from the Cooperative.

2. Increased Cooperation among Institutions (0)

3. Changes in Land Tenure (0)

8. Comité Pro-Asociación de Desarrollo, Guaymí Indian Reserve

<u>Impact</u>	<u>Performance</u>
I. SOCIAL SUSTAINABILITY	
1. Change in attitudes (+)	"Before 1990, <u>oscuro</u> , now we have help from BOSCOA. Once we purchase our land, we live better (now only 5 families own agricultural plots)."
2. Increased Organizational Development (+)	"BOSCOA has helped us more than any other agency." Guaymí chose Silvia instead of CONAI to process Asoc. de Desarrollo papers/ <u>tramites</u> . After forming association, will want BOSCOA training for organizational development. 2 new organizations formed: <ul style="list-style-type: none">• Junta Pro-Asociación to buy land.• Comité Artesanal (Artisanal Committee).
3. Increased Human Resources (+)	Approximately 10 people are now producing earrings, bags, dresses (7 women, 3 men). They are also planning to train children in these crafts. Patronato and Junta Educación will build school and hire teacher. 1 paraforester has been trained.
4. Increased Employment Opportunities (+)	School construction involved employment of community members. 1 paraforester receives half-time salary from BOSCOA. 1 merchant involved in selling the artisanal products.
II. ECONOMIC SUSTAINABILITY	
1. More Diversified Economy (+)	10 artisanal producers.

Impact

2. Increased Income Levels (+)

Performance

There is, though, an unequal distribution of benefits with most income directed towards the artisans.

New sources of income: artesanía; there will be more land for agriculture once non-indigenous land-holdings are purchased.

Optimistic attitude toward future opportunities.

III. ECOLOGICAL SUSTAINABILITY

1. Fewer Forests at Risk (+)

2,700 ha in RIG.

After non-indigenous land purchase, aspire to improve land-use with BOSCOA's help (land-use (LU) capability study).

2. Improved Land Use (+)

Paraforester should do LU capability study as land is purchased.

IV. POLITICAL SUSTAINABILITY

1. Changes in Policy (0)

2. Increased Cooperation among Institutions (+)

Land purchase negotiation with CONAI, Fundación Neotrópica

School construction with MEP

Formation of Asoc. Desarrollo with CONAI, DINADECO

3. Changes in Land Tenure (+)

Funds were obtained to buy 10 of 17 non-indigenous land holdings within RIG.

9. Cooperativa Autogestionaria de Mar y Tierra (COPEMARTI)

(This cooperative, originally established as a settlement for Nicaraguan refugees, now includes 14 families, 12 of which are "Ticos," (Costa Ricans) and 2 of which are "Nicas," (Nicaraguans). The cooperative owns 200 ha of land.)

Impact

Performance

I. SOCIAL SUSTAINABILITY

- | | |
|---|---|
| 1. Change in attitudes (small +) | Nelson seems optimistic but didn't get a good sense of this. |
| 2. Increased Organizational Development (+) | <ul style="list-style-type: none">• Received grant from Dutch Embassy for tree nursery (\$7,500).• Has bank loans for various agricultural initiatives and will receive incentives from DGF's Forestry Development Fund for reforestation. |
| 3. Increased Human Resources (small +) | 1 person being trained as paraforester and nursery caretaker; not receiving CRS training. |
| 4. Increased Employment Opportunities (small +) | Temporary employment for paraforester. |

II. ECONOMIC SUSTAINABILITY

- | | |
|-----------------------------------|---|
| 1. More Diversified Economy (+/0) | Mostly potential: tourism, reforestation, agro-forestry systems. |
| 2. Increased Income Levels (0/+) | Potential exists through activities mentioned above plus renovated cacao plantation and reforestation incentives. |

III. ECOLOGICAL SUSTAINABILITY

- | | |
|------------------------------|---|
| 1. Fewer Forests at Risk (0) | |
| 2. Improved Land-Use (+) | Current land-use is 70 ha rice, 35 ha natural forest, 45 ha cacao, 35 ha pasture, 2 ha reforested; of this total, an additional 25 ha is scheduled for reforestation in 1992. |

Impact

Performance

IV. POLITICAL SUSTAINABILITY

1. Changes in Policy (0)
2. Increased Cooperation among Institutions (0)
3. Changes in Land Tenure (0)

10. Sindicato de Productores Agrícola Independientes del Cantón de Osa (SIPRAICO)

Impact

Performance

I. SOCIAL SUSTAINABILITY

1. Change in Attitude (0)

SIPRAICO board members say they have good personal relations with BOSCOA staff, however they perceive BOSCOA as an "outside" organization that: (1) imposes inappropriate programs on Osa people without their participation; (2) gets lots of money and spends it on their own salaries, vehicles and equipment without benefiting the local people; and (3) works in collusion with MIRENEM against the interests of Osa people.

Two paraforesters from SIPRAICO say that there is a noticeable change in attitude among the members; many are now more open to BOSCOA's concepts of forest management and agricultural alternatives.

2. Increased Organizational Development (0)

Some members have taken BOSCOA's accounting course. Junta members view this as a way to develop organizational capacity to get direct grants, but they don't see BOSCOA facilitating this process. They would rather get organizational assistance from organizations they consider to be political allies. Some members continue to blame BOSCOA for recommending against their receiving a grant (1990); they view BOSCOA as a threat rather than a facilitator of their organizational development. The syndicate has 50 active members and can call upon another 350 to join them in times of crisis.

3. Increased Human Resources (+)

2 paraforesters; 2 in accounting course.

4. Increased Economic Opportunities (0)

II. ECONOMIC SUSTAINABILITY

1. More Diversified Economy (0)

2. Increased Income Levels (0)

Impact

Performance

III. ECOLOGICAL SUSTAINABILITY

1. Fewer Forests at Risk (-)

SIPRAICO is officially challenging the constitutionality of the existence of the Golfo Dulce Forest Reserve, based on the inalienability of private property. If they are successful, more forests will be at risk.

2. Improved Land Use (0)

BOSCOSA is drafting a forest management plan for 12 SIPRAICO members. Other members say that although these Plans are cheaper (BOSCOSA doesn't charge for them), BOSCOSA doesn't allow the land owner to do the timber extraction "his own way." This is viewed as an imposed limitation on personal liberty.

IV. POLITICAL SUSTAINABILITY

1. Changes in Policy (-)

SIPRAICO blames BOSCOSA for not having facilitated the granting of the infamous "B5" timber-cutting permits.

2. Increased Cooperation among Institutions (0)

3. Changes in Land Tenure (-)

SIPRAICO blames BOSCOSA for not solving land tenure problems. This is the No. 1 problem in the Osa and SIPRAICO works hard to prevent the displacement of Osa campesinos from protected areas; if campesinos are removed, it tries to negotiate high payment for their lands. Of SIPRAICO's 600 members, only about 15 have title to their land. SIPRAICO considers BOSCOSA's Plan de Ordenamiento Territorial another example of top-down planning; they propose a bottom-up strategy focusing on farmers' needs primarily rather than on ecological considerations.

Appendix F: BOSCOA Program Area Summaries

I. Agriculture

Staff Interviewed: Alfredo Quintero, Juan Domingo Vasquez, Luis Peña

What do you do?

- 1) Give technical assistance to projects, providing technical training in preparation of soils, planting, control of pests and weeds (minimizing chemical inputs), and marketing of production. Promoted crops: pejibaye, guanábana, fiame, tiquisque and naranjilla.
- 2) Establishment of small agro-forestry demonstration plots with individual farmers.
- 3) Agro-industry initiatives (guanábana). Thinks ASGUACA has the potential to be a very successful project.

What are your three most outstanding achievements?

- 1) Adoption of alternatives: ASOPRAQ (pejibaye), ASGUACA (guanábana, fiame, tiquisque), APROFISA (pejibaye, guanábana, tiquisque), CAM (tiquisque).
- 2) Provision of directed and continuous technical assistance where none existed before.
- 3) Leveraging of funds for groups on the peninsula through BOSCOA.
- 4) Standardization of agricultural extension recommendations between agencies.
- 5) Increased organizational development.

Lessons learned:

- 1) Things take time; you have to take your cue from the people you are working with.
- 2) Avoid paternalism; don't give people too much.
- 3) The farmer needs a lot of contact with the technician in order to have confidence.

Doubts/Problems:

- 1) Lack of research on alternatives offered; would like to promote alternatives that have been successful in other similar sites. (Is unsure in particular about pejibaye.)

- 2) What happens if the project ends before self-sufficiency has been achieved?
- 3) Are we encouraging self-sufficiency in the right way?

What would you like to do in the future?

- 1) Increase value-added to promoted crops through agro-industrial ventures (e.g., processing of guanábana, pejibaye, naranjilla and carambola).
- 2) Would like to establish cooperative agreements (convenios) with other institutions to carry out research on agricultural alternatives.
- 3) Would like to establish a network among the existing groups on the peninsula (to share information and lessons learned).

II. Forest Management

Staff: Juan José Jimenez, Ruperto Vargas, Eliomar Vargas, Edwin Jenkins

What do you do?

- 1) Production forestry through natural forest management: ASOPRAQ, SIPRAICO, CAM.
- 2) Incentives for standing forest: ADESCAB.
- 3) Establishment of forest reserves for ecotourism using a concession mechanism: AACB.
- 4) Reforestation: CAM, ASOPRAQ, APROFISA, COOPEMARTI, and potentially with SIPRAICO.
- 5) Ordenamiento territorial: Reserva Indígena Guaymí de Osa (RIGO).
- 6) Establishment of forest reserves for conservation: ASOPRAQ/Arlequin.

What are your three most outstanding achievements?

- 1) The number of people and hectares under BOSCOA forest management plans.
- 2) The change in people's attitudes toward the forest, brought about principally through the forestry activities of BOSCOA.
- 3) The demonstration effect of BOSCOA's forestry activities; people realize that there are forest management alternatives.
- 4) The paraforesters program.

Lessons learned:

- 1) People need to see things, and not just be told about them (e.g., forest management).
- 2) The more involved people are, the greater the chance of success.
- 3) BOSCOSA team members should focus their efforts on what they know best and not spread themselves too thinly. They should call in other team members when they need assistance in an area outside of their expertise.
- 4) Start small.
- 5) Take your cues from the people you are working with.

Doubts/Problems:

- 1) BOSCOSA cannot count on the DGF to take their side. Most of the problems with forest management on the Osa are institutional and not technical.
- 2) Lack of knowledge on BOSCOSA's part of what MIRENEM is planning and, thus, the possibility of unwittingly misleading local people and losing credibility.
- 3) Outcome of SIPRAICO's suit to have the forest reserve declared unconstitutional.

What would you like to do in the future?

- 1) Fully implement the management plans that BOSCOSA has consolidated thus far, especially concerning the forest-industry integration which is planned but thus far hasn't really been implemented.
- 2) Research on the sustainability of BOSCOSA's forest management plans.
- 3) Follow-up to the paraforester's program.
- 4) Getting sufficient financial support to carry out forestry activities as planned.

II. (A) Paraforesters

Staff: Hugo Alvarez

What do you do?

Manage the paraforester training program whereby eleven (originally 12) campesinos selected by BOSCOSA's target groups are being trained in reforestation, nursery management, measurement of parcels, making plans and maps, measurement of trees and forest inventory, soil analysis, land-use

capability, watershed management, and extension techniques. The paraforesters are paid a half-time stipend by BOSCOA during the one year duration of the course. Class-work and field work with BOSCOA staff take place over 7-8 days out of the 15, the rest are spent on individual projects.

What are your three most outstanding achievements?

- 1) Community groups perceive the paraforester program to be a great benefit provided by BOSCOA.
- 2) Paraforesters becoming a resource for their communities.
- 3) Paraforesters will be able to help BOSCOA staff do more management plans.

Lessons learned:

- 1) Heavy emphasis on field work (prácticas) is good.
- 2) More emphasis on farm management would be useful.
- 3) Would like follow-up to reinforce and expand their broad but shallow knowledge. This could be individualized to suit each paraforester's priorities, e.g., management plans, sawmill, nursery, etc.

Doubts/Problems:

- 1) Insufficient integration of farm and forest topics.
- 2) Campeños need to see results; we need to be able to show them results. Will we be able to do this?
- 3) Lack of ability on the part of their groups to support their work financially in the future.

What are your future priorities:

SIPRAICO - Help with the management plans.

AACB - Help with resource management plan; environmental education.

COPEMARTI - Nursery, reforestation, maybe forestry (they have 35 ha forest).

Guaymí - Ordenamiento de Tierras, forest management plans.

APROFISA- Reforestation.

ASGUACA- Purchase land and reforest upper watershed.

ASOPRAQ - Forest management plan, sawmill.

CAM - Forest management plan, sawmill.

- 1) All would like follow-up instruction on themes particular to their organization.
- 2) Also would like more instruction on Ordenamiento de Tierras.
- 3) BOSCOA will do an internal evaluation of the program in July, after which the future of the paraforester program will be determined.

III. Research

Staff: Ricardo Soto

What do you do?

- 1) Rapid Ecological Assessment (REA), the purposes of which were:
 - a) To fill gaps in the existing biological information for the Osa;
 - b) Provide useful information about species, etc., to BOSCOA's other programs, e.g., forestry, agriculture;
 - c) Involve local communities in the assessment;
 - d) Make recommendations on the design of an integrated research program for the Osa, including basic research (Sirena) and applied research (Agua Buena).
- 2) Convenio with ITCR for research on forest harvesting techniques and environmental impacts (William Cordero and Andrew Howard).
- 3) Permanent reforestation research plots.

What are your three most outstanding achievements?

- 1) The REA provided a wealth of new information about biodiversity on the peninsula.
- 2) This information is beginning to be used by universities, MIRENEM, etc.
- 3) The identification of high priority areas for protection through the establishment of a corridor.

Lessons learned:

- 1) The selection of survey sites, which was done without the aid of satellite imagery, was not as good as it could have been (some of the sites were inappropriate).
- 2) The various team's itineraries should have been better coordinated. (Teams ended up surveying different sites.)
- 3) People contracted to carry out the inventory should have had more dedication to the Osa (many may never work here again).
- 4) More detailed terms of reference for team members would have resulted in higher quality and more comparable information.

Problems/Doubts:

- 1) Osa biological corridor for absolute protection, proposed by Tropical Science Center study, is different from the recommendations coming out of the REA. Will MIRENEM take REA's recommendations into account?
- 2) Workshops to present the REA's findings to the communities - how will they react to the REA's recommendations?

Priorities for the future:

- 1) The Osa biological corridor.
- 2) Applied forestry research on germination and propagation of forest species, designed to provide useful silvicultural information to BOSCOA's forestry program.
- 3) Applied socioeconomic research to assist BOSCOA in its community work.
- 4) Dissemination of the results and findings coming out of BOSCOA's many activities.

IV. Training

Staff: Juan Domingo Vásquez, Magda Vargas

What do you do?

- 1) Provide training to BOSCOA's target organizations in organizational development, administration, accounting, marketing, and proposal formulation (5 modules) through workshops.
- 2) Cultural promotion and artisan development.

What are your three most outstanding achievements?

- 1) Organizational dynamic generated by the courses (most successful: Guaymí; least successful: ASOPRAQ).
- 2) Increased number of trained people able to promote activities within their communities.
- 3) Creation of (income generating) artisan activities where none existed before: 50 workshops given, six groups formed (CAM, ASOPRAQ, ASOFEP, Guaymí, AACB, ADESCAB).

Lessons learned:

- 1) You have to respect the character of the communities in which you are working, from the beginning.

- 2) Follow-up is necessary to assure markets and economic profitability.

Doubts/problems:

- 1) Social crisis on the peninsula with respect to BOSCOA, has slowed and/or made their work more difficult. Will it happen again?
- 2) With respect to handicrafts, will the activities they are promoting be successful, i.e. economically profitable and socially sustainable?

What are your future priorities?:

- 1) Follow-up to the five modules on administration.
- 2) Focus on the formation of community leaders.
- 3) Set up a workshop for "training the trainers" in handicrafts with Manuel Bianca Lara as the trainer. "Centro de Capacitacion en Ebanisteria y Artesania."

V. Environmental Education

Staff: Rodolfo Quiróz, Magda Vargas

What do you do?

- 1) Work with BOSCOA's target groups: ASOPRAQ/Arlequin, AACB (not working with much), Guaymí (traditional use), ADESCAB, ASOFEP, CAM.
- 2) Make presentations at (8) local schools: El Campo, Rancho Quemado, La Patria, Banegas, Rincon, Guaymí, Agujitas, Canaza.
- 3) In the process of establishing the Centro Juvenil Tropical.

What are your three most outstanding achievements?

- 1) Organized two environmental education workshops for all of the school teachers on the peninsula (ca. 40 teachers), in coordination with the Ministry of Public Education.
- 2) Success of the children's group in Rancho Quemado, given the many obstacles.
- 3) Obtaining \$1.2 million for the Centro Juvenil Tropical from DANIDA.

Lessons learned:

- 1) Let the group manage its own process of development.
- 2) Respect and learn to use the local vocabulary. Adjust your mindset to the reality of the Osa.

Doubts/problems:

- 1) Lack of didactic materials.
- 2) Pedagogical methodology - is it correct?
- 3) We should be more aggressive in looking for funding.
- 4) Should BOSCOA become an environmental action/lobbying group? Should community groups denounce environmental degradation on the Osa?

What would you like to do in the future?

- 1) Centro Juvenil Tropical:
 - a) Summer camps for local, national, and international children;
 - b) Teacher training;
 - c) Radio program;
 - d) Produce teaching and promotional materials.
- 2) Continue environmental education work in the communities (Arlequin, ASOFEP, ADESCAB, Cerro Brujo, Guaymí, CAM), and with 8 schools.

VI. Information Management

Staff: Valentín Jiménez, Elvis Arias

What do you do?

- 1) Geographic Information System (entered thus far: land-use capability, current use, rivers, roads, protected areas, elevation, watershed).
- 2) Monitoring (Forest Management, Protection, Reforestation, Nurseries, Organizations, Training, Projects, Farms, Attitudes, Alternatives, Financing, Information, Evolution, Reference).
- 3) Bibliographic Database (Centro Documentación) (ISIS).
- 4) Statistical analysis (SAS).

What are your three most outstanding achievements?

- 1) Established referential database for project monitoring.

- 2) GIS established and maps available.
- 3) Participated in a CIDA project on radar imaging.

Lessons learned:

- 1) GIS is rapidly implemented, once data is entered.
- 2) Teamwork was necessary for establishing the project monitoring database.
- 3) Easy access to project information is important.

Problems/doubts:

- 1) Will other institutions use our information?
- 2) We need training in how to use different software packages.
- 3) Lack of compatibility between current hardware and new software due to technological advances.
- 4) Need to systematize the project monitoring database (clarify what information is needed and why).

What are your future priorities:

- 1) Get project monitoring database in order and make sure the data is secure.
- 2) GIS and project monitoring system have to be made into tools for both BOSCOA and others to use.
- 3) Get Fundación Neotrópica to internalize the BOSCOA information management system for their other projects.
- 4) Begin biological monitoring program on the peninsula.
- 5) Establish national network of information systems.

VII. Policy ("Gestión y Política")

Staff: Silvia Chavez (CEDARENA)

What do you do?

In general, work is done on two levels: local and non-local. On local level, work with BOSCOA's target groups to involve them in regional planning processes and to help them develop

the capacity to negotiate with institutions. On the non-local level, work with DGF, ACOSA, IDA, MIRENEM, CONAI on regional planning documents, policy and legislation.

Specifically, Silvia is working on:

- 1) Guaymí: definition of the reserve, negotiate land purchase;
- 2) AACB: put the project on a secure legal footing, a pilot project in how a group can manage a community forest, using the existing law;
- 3) Plan de Ordenamiento Territorial;
- 4) Legal council for BOSCOSA portfolio - contracts, etc.;
- 5) Legislation and Policy - provide legal council and advice re: government ministries and assemblies.

What are your three most outstanding achievements?

- 1) The program is new, beginning this year. However, if the Plan de Ordenamiento is approved, it will be a major step towards resolving both the serious land tenure crisis on the peninsula, and the problem of overlapping institutional mandates in the Golfo Dulce Forest Reserve.
- 2) The community forest project in Cerro Brujo will hopefully generate a local solution that can be replicated in other sites on the Peninsula; this remedy has the potential to conserve federal forest lands throughout the country.
- 3) Relatively rapid progress on organizing the Guaymí and beginning the process of consolidating the Reserve's land base.

Lessons learned:

- 1) Program must be non-confrontational; conflicts must be avoided.
- 2) To avoid misunderstanding and defuse local mistrust, communities must be consulted in the development of regional plans like OSA 2000 and the Plan de Ordenamiento Territorial.
- 3) Need for this program is great, and emerged during BOSCOSA's annual planning process.

Doubts/problems:

- 1) Process could generate conflict at both local and national level if not handled correctly. Locally, the effort could be interpreted as an attempt by BOSCOSA to expropriate land (to accept a concession is to renounce your rights to the land). Nationally, conflict within MIRENEM (DGF is open to the idea, SPN is not supportive) could undermine BOSCOSA's efforts. Thus, the local solution may not be feasible politically at the national level.

- 2) May not be enough money to carry out the planned activities.
- 3) MIRENEM might expropriate land from those living in areas designated for protection within the reserve.

What are your future priorities:

- 1) Secure lands for the Guaymil Reserve.
- 2) Develop AACB model for communal forest concessions.
- 3) Complete Plan de Ordenamiento Territorial.

VIII. Ecotourism

Staff: Walter Rodriguez

What do you do?

- 1) Walter works half time with BOSCOA, and half time with ACOSA.
- 2) Worked on updating the tourist information, and prepared ecotourism guide (published).
- 3) Opened tourism office in Puerto Jimenez.
- 4) Formed regional tourism body for the Osa Peninsula.
- 5) Works with local groups to develop ecotourism initiatives (AACB, CoopeUnioro, Rincon de Osa (mirador), Puerto Jimenez (transport), Drake (Isla de Cafi)).

What are your three most outstanding achievements?

- 1) Getting the ecotourism guide completed, which has been in process for over two years.
- 2) Opening the office in Puerto Jimenez.
- 3) Development of the institutional relationship between ACOSA and BOSCOA.

Lessons learned:

- 1) Local groups need a lot of contact and encouragement in the development of ecotourism initiatives.
- 2) Don't overextend yourself.

Doubts/problems:

- 1) Lack of financial backing for ecotourism within BOSCOA/ACOSA.
- 2) What is the future of the ecotourism program within BOSCOA?

3) **Lack of transportation (no car).**

What are your future priorities?:

- 1) **Working with local groups to develop ecotourism initiatives.**
- 2) **Open tourist offices in two other strategic sites on the Peninsula: La Palma and Drake.**
- 3) **Consolidate and try to focus the activities of the youth conservation groups in La Palma and Puerto Jimenez.**
- 4) **Carry out three seminars on ecotourism development in local communities, and begin training course for naturalist guides.**

Appendix G: BOSCOA Staff Members

Technical Staff

1. José J. Campos A., Forester, M.Sc., D.Phil, Director
2. Hugo Alvarez, Forester, Coordinator Guaymí Reserve Management Plan and Paraforesters
3. Elvis Arias, Geographer, Geographic Information System (GIS)
4. Luis Peña, Agronomist
5. Silvia Chavez, Attorney, Legal Advisor, Legal Business and Policies, CEDARENA
6. Edwin Jenkins, Assistant Forester, Coordinator Coopeagromuebles
7. Juan José Jiménez, Forester, Technical Coordinator
8. Valentín Jiménez, Forestry Analyst, Coordinator Data Management
9. Alfredo Quintero, Agronomist, Coordinator, Agriculture and Coopemartí, ASGUACA and APROFISA
10. Reinaldo Aguero, Parataxonomist, INBio
11. Rodolfo Quiróz, Biologist, Coordinator, Environmental Education
12. Walter Rodríguez, Degree in Tourism, Coordinator, Ecotourism
13. Leonidas Serracín, Paraforester
14. Ana Lucía Solano, Lic. in Social Planning and Promotion
15. Ricardo Soto, Biologist, M.Sc., Coordinator REA, Biodiversity Advisor/Consultant
16. William Ulfelder, Political Scientist, Volunteer
17. Magda Vargas, Cultural and Handicrafts Skills Promoter
18. Eliomar Vargas, Forester, Coordinator ASOPRAQ
19. Ruperto Vargas, Forester, Coordinator Forestry, AACB and SIPRAICO
20. Juan Domingo Vásquez, Administrator of Agricultural Enterprises, Coordinator, Training

Administrative Staff

21. José Edmundo Andrade, Business Administrator, Administrative Coordinator
22. Alexis Arias, Administrator of Centro BOSCOA
23. Ana Patricia Obando, Administrative Assistant
24. Carolina Castro, Secretary
25. Deyanira Chavarría, Cleaner, Centro BOSCOA
26. Elizabeth Matarrita, Cook, Centro BOSCOA
27. Inocente Baroso, Head of Maintenance, Centro BOSCOA
28. Enrique Serracín, Guard
29. Victor Hugo Contreras, Guard
30. Gerardo Vargas, Guard

Appendix H: List of BOSCOA Documents, 1988-1992

1. Fundación Neotrópica. 1992. Programa BOSCOA. Plan de Trabajo 1992. 55p. (BORRADOR)
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- 21.* Fundación Neotrópica. Programa BOSCOA. Informe Trimestral octubre-diciembre 1991.
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* Documents reviewed by the evaluation team during the course of the evaluation

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