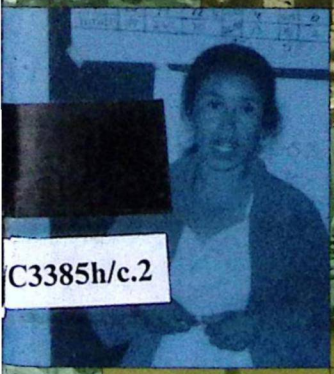

Sustainable Development for the Future

CATIE'S PROJECTS

CATIE

Sustainable Development for the Future

CATIE'S PROJECTS

Outreach Program
September 2001

CATIE

333.714
T856 Tropical Agriculture Research and Higher Education Center
Sustainable development for the future: CATIE's projects/
Tropical Agriculture Research and Higher Education Center.
Turrialba, C.R. : CATIE. Outreach Program, 2001.
60 p.; 24 cm.
1. CATIE – Proyectos de desarrollo 2. Sostenibilidad -
Proyectos de desarrollo I. Titulo

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CATIE
Tropical Agriculture Research and Higher Education Center

CATIE is an autonomous, non-profit international civil association, whose mission is to improve the well-being of humanity, through the application of scientific research and higher education to the development, conservation and sustainable use of natural resources in the American tropics. The Center's regular members are Belize, Colombia, Costa Rica, the Dominican Republic, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Venezuela and the Interamerican Institute for Cooperation on Agriculture (IICA).

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CATIE

Presentation

CATIE is a regional organization possessing a long-standing tradition and widespread recognition. It is actively involved in research, higher education and the execution of development projects in agriculture and natural resource management in the American tropics.

Dr. Pedro Ferreira Rossi
Director General

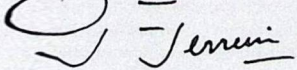
CATIE's research and development projects are the most important and effective manifestations of CATIE's institutional presence and direct involvement in member countries. They provide unique opportunities to apply and adapt technologies in pilot areas with the support and participation of national and local organizations. They also provide opportunities to carry out higher education, post-graduate research and participatory evaluation in "real-world" conditions. From this perspective, CATIE's R&D projects, in conjunction with research and higher education efforts, constitute the backbone of our institution.

Over the years, CATIE's research and development projects have yielded a substantial number of important benefits: significant contributions to efforts to achieve sustainable development and improve rural livelihoods; the strengthening of governmental and non-governmental organizations; the creation and consolidation of networks that foster horizontal cooperation, timely technical support to community groups and municipalities, among others. These projects have been made possible thanks to invaluable support from numerous entities including interna-

tional development agencies that contribute to bi- and multilateral cooperation, the World Bank, the Interamerican Development Bank, universities and research organizations.

As we embark on this new millennium, CATIE is taking stock of lessons learned together with its national, regional and international partners from the public and private sector in member countries. This effort includes an increased emphasis on monitoring and evaluation, in the determination of the impacts of CATIE's collaborative activities and in the development of CATIE's new strategic plan. Taken together, these efforts will improve the quality and effectiveness of CATIE's cooperative efforts and will help us fulfill our commitment to support projects that foster sustainable development in the region.

From this perspective, the publication of this document is of extreme importance to CATIE. It forms part of our institutional effort to systematize our experiences and share them with our partners.



Dr. Pedro Ferreira Rossi
Director General

Contents

Introduction

It is not an easy task to determine precisely the impact that CATIE's cooperation in research and development projects has had. Nevertheless, CATIE is making a concerted effort to ascertain and document lessons learned from its multitude of experiences. In this publication, for example, we provide a brief description of 23 projects which have been implemented during the past five years.

Since any effort to contribute to sustainable development is a learning process, new projects must capitalize and build on experiences of past projects and those currently underway. For example:

In Nicaragua, personnel from the MIP/AF (NORAD) Program have accumulated much knowledge on the development and participatory application of new management options for pests in coffee, vegetables, bananas and plantains; they have held a great number of participatory training events with extension agents; have fostered the formation of regional groups that cooperate in Integrated Pest Management issues; and have published a variety of technical manuals. These experiences are now providing invaluable inputs to similar initiatives in Guatemala, Honduras and El Salvador.

The staff of the TRANSFORMA and Olafo Projects conduct important work in the northern coastal mountains and in the Mosquitia region of Honduras. Work includes the development, validation and dissemination of technology; the application of appropriate forest management systems; the development of operational management areas for demonstration purposes with community leadership and participation; efforts to encourage the formation and consolidation of REMBLAH, a network for horizontal cooperation; strengthening of internal organizations within various rural communities; adoption of agroforestry practices to reduce pressure on natural forests; the application of creative

methodologies for conflict management and resolution; and institutional strengthening within municipalities. Much has and is being learned for future initiatives carried out for the conservation and management of natural resources.

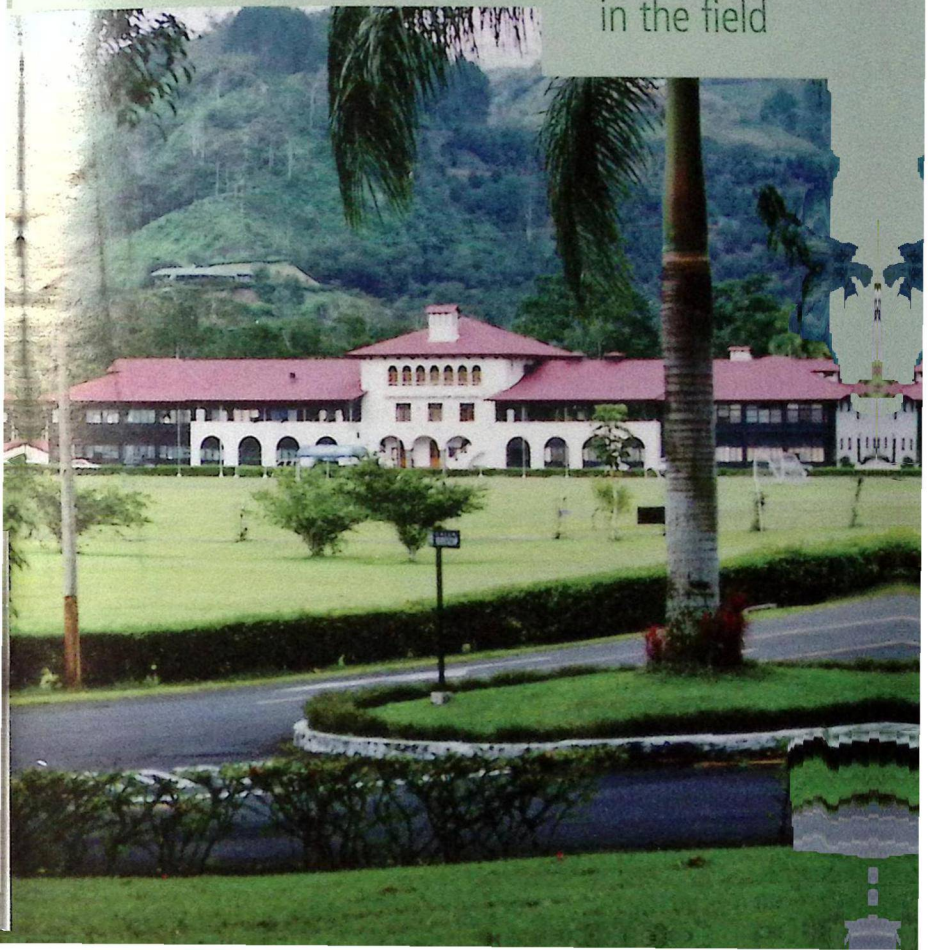
In Honduras and Nicaragua, FOCUENCAS is making important strides in micro-watershed management, in vulnerability reduction and in the strengthening of local institutions to better prepare for and respond to natural disasters. This work is capitalizing on CATIE's broad base of experiences in watershed management in Central America.

PROSEFOR occupies an important niche in regional efforts to augment reforestation and forestation programs, dedicating considerable expertise and resources to production and distribution of high quality forest seeds. The regional initiative also supports and strengthens forest seed banks in member countries throughout the region and publishes practical information on the collection, handling, storage and germination of tree seeds of diverse species. Again, the experiences and information generated by PROSEFOR will be an invaluable resource for future reforestation efforts in the region.

CATIE's R&D projects are well thought out and planned. Each project incorporates a tailored monitoring system for analyzing in a timely fashion its progress and impact. This document details briefly the objectives, activities and impacts of CATIE's R&D projects in an effort to inform interested persons and organizations within and outside the Central American region.

CATIE's Projects

Activities in the field



...on of Integrated Pest Management and ...orestry (Regional)

The IPM/AF Program fosters integrated pest management and agroforestry in coffee, vegetables, basic grains, bananas and plantains from an ecological perspective. Management decisions are based on field observations and on the analysis and implementation of alternative options; the IPF/AF Program stresses participatory methodologies, with rural families being the principal protagonists in decision making and in the implementation of IPM and agroforestry practices.

...s with greater crop yields, ...d more diversified production ...proved resource conservation

CATIE and its collaborators in Nicaragua and Central America apply their institutional capacities and experiences to enhance in-country capabilities to carry out participatory implementation of IPM and agroforestry. This is achieved through inter-institutional coordination to identify alternative management options for integrated pest management and by strengthening institutional capacity and that of families working in the agricultural sector.

Impact

- 15,000 small and mid-sized rural producers in Nicaragua and 1,500 in other countries, improve their decision making capabilities regarding crop management, based on ecological considerations and systematic observations of crops, trees, pests and natural enemies.
- 400 extension agents in Nicaragua and 250 in other countries, work with small and mid-sized producers to strengthen their knowledge and abilities in the participatory implementation of IPM and agroforestry practices in coffee, based on ecological considerations. This work is carried out with an explicit gender focus.
- 60 specialists in Nicaragua and 40 in other countries increase their ecological

knowledge of pests, crops and practical and participatory methodologies, to plan, execute and evaluate training processes of extension agents working with small and medium-sized producers.

- Opportunities for multi-institutional sharing with the participation of public, private and educational entities, producer associations and NGOs which coordinate and evaluate IPM and agroforestry projects and activities.
- Decision-makers within institutions possess a greater understanding of the participatory implementation of IPM and agroforestry practices based on ecological considerations and carried out with a gender focus.
- National researchers and CATIE scientists develop research strategies and methodologies based on field priorities which are carried out in both participatory and formal research activities.

Beginning date:	June, 1989
Ending date:	August, 2003
Total amount:	US$ 16,346.000
Project duration:	11 years
Geographical region:	Nicaragua, Costa Rica, TRIFINIO tri-national area
Number of staff:	25
Beneficiaries:	650 extension agents, 100 specialists and researchers, 100 counterpart institutions, 16,500 families producing coffee, vegetables, basic grains, bananas and plantains
Counterpart institutions:	In Nicaragua, MAG-FOR (Ministry of Agriculture and Forestry) and INTA (Nicaraguan Agricultural Technology Institute), approximately 70 organizations (NGOs, producer associations, firms that offer technical services, universities, and public sector entities). ICAFE in Costa Rica, PROCAFE in El Salvador, IHCAFE in Honduras and ANACAFE in Guatemala. Projects with their associated institutions (Trifinio, PRODERCO in Honduras).

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FOCUENCAS

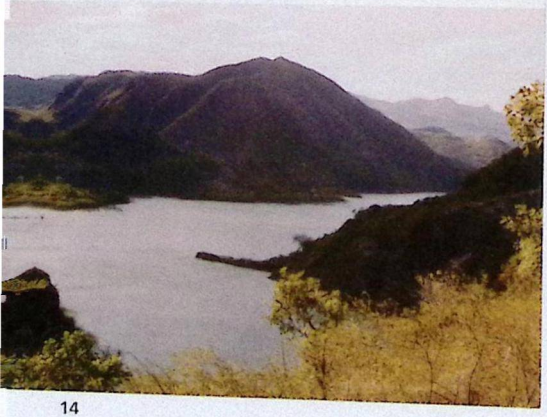
Strengthening of Local Capacity for Water Management and Prevention of Natural Disasters (Regional)

This program works with two components or projects:

■ **Strengthening of Local Capacity for Watershed Management and Prevention of Natural Disasters:** This area aims to strengthen management capacities in local communities and municipalities, located in vulnerable watersheds in Honduras and Nicaragua, so that they are able to make decisions contributing to sustainable natural resource management and land rehabilitation, thus reducing vulnerability in watersheds.

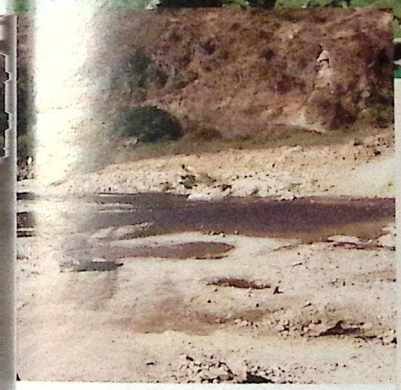
This participatory and self-management process contributes to the sustainable and profitable management of natural resources and to a better quality of life within the communities.

...by managing watersheds appropriately, we improve our well-being



■ **Professional formation at the Masters level for natural resource planning and management, with an emphasis on integrated watershed management:** The main objective of this component is to prepare 30 Central American professionals in integrated watershed management, and to produce 30 research studies on important themes related to watershed management in Central America in areas affected by Hurricane Mitch.

Likewise, participants are encouraged to develop managerial and administrative skills needed to design, elaborate, implement, diagnose, monitor and evaluate watershed management programs, applying systematic, interdisciplinary and participatory perspectives and methodologies.



Beginning date:	February, 2000
Ending date:	December, 2003
Total amount:	US$ 4,598.234
Time in execution:	1 year, Masters Program 7 months, local strengthening
Geographical areas:	**Nicaragua and Honduras:** Local strengthening **Central America:** Masters Program
Number of staff:	12
Beneficiaries:	3000 families, community leaders, professionals and technicians, governments, municipalities, local groups, high schools and elementary schools.
Counterpart institutions:	**Nicaragua:** INTA, MAG-FOR, MARENA **Honduras:** SAG-PRONADERS, SERNA, AFE-COHDEFOR

Impact

- Reduction of vulnerability.
- Increased water supply.
- Better water quality.
- Increase profitability of crop and forestry/agroforestry activities .
- 3,000 families participating in the management of productive projects at the local level.
- 30 professionals trained in watershed management at the masters level.
- Extension agents, local promoters and leaders trained in five demonstration areas.
- Municipalities strengthened in the management of natural resource.

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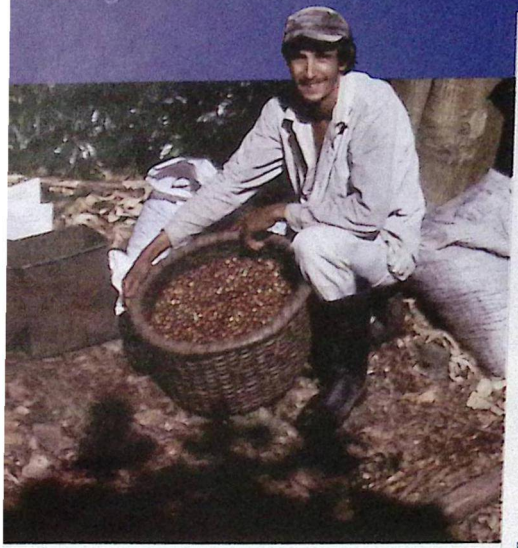
CATIE/GTZ
Agroforestry
(Regional)



Work with groups of producers which serve as models for diffusion from farmer to farmer

This project benefits small and medium farmers, in ecologically threatened areas of Central America, so that families can improve their income through sustainable resource management.

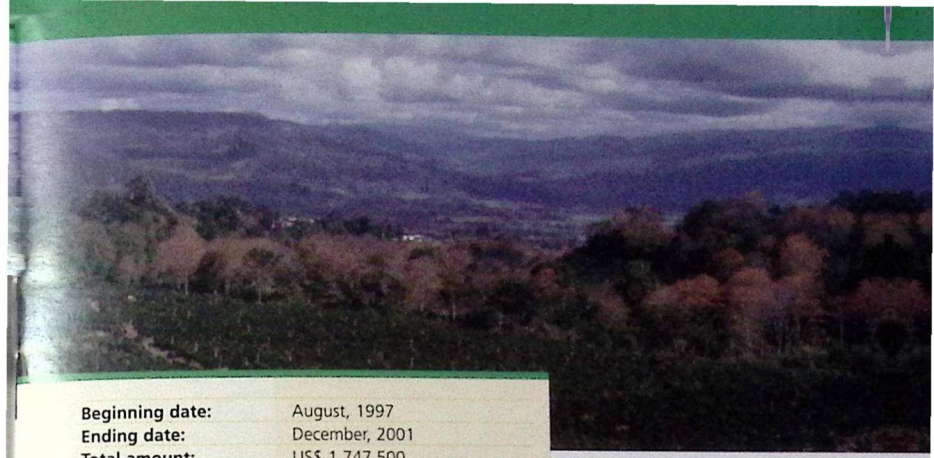
Its objective is to disseminate agroforestry practices researched by the project, CATIE and other groups. The central themes are agroforestry systems with perennial crops (coffee, cacao), silvopastoral systems, home gardens and reforestation systems.

To achieve this goal, the project:

- Elaborates and publishes teaching materials and other publications to document and disseminate up-to-date agroforestry knowledge. This information is distributed principally through counterpart institutions, to achieve better coverage in the region.
- Supports and organizes training and technology transfer activities with counterpart institutions and other organizations in Central America.
- Supports professional formation in agroforestry, watershed management, ecological agriculture and other fields within CATIE's Graduate School.
- Fosters strategic collaboration between CATIE and other research, training and higher education institutions.

Impact

- Collection of training modules in agroforestry: 7 books published to date, 2 additional volumes in preparation.
- Production of materials to train producers.



Beginning date:	August, 1997
Ending date:	December, 2001
Total amount:	US$ 1,747.500
Project duration:	3 years
Geographical area:	Central America, primarily in Costa Rica, Guatemala, Honduras, Nicaragua and Panama
Number of staff:	7
Beneficiaries:	Counterpart institutions and organizations; approximately 1000 producers.
Counterpart institutions:	**Costa Rica:** DECAFOR, ICAFE, Organic Producers Association of Turrialba (APOT), Latin American Small Producers Association **El Salvador:** PROCAFE **Guatemala:** ANACAFE, Verapaces-GTZ Program **Honduras:** FHIA, IHCAFE, Honduran Agroforestry Network, GTZ "Rio Platano" Project **Panama:** ANAM, Mesoamerican Biological Corridor, Ngobe-GTZ Project **Dominican Republic:** GTZ "PROCARYN" Project (Yaque River High Watershed Project and Conservation)

- Professional formation in agroforestry through CATIE's Graduate Program (43 Graduate students advised).
- Training of over 400 technicians and extension agents from collaborating institutions.
- Over 3000 producers have participated in training events.
- Up-to-date information presented in over 50 technical/scientific publications.
- Incorporation of 1000 producers in Agroforestry System technology transfer activities, promoted by the project and organized by counterparts.
- Agroforestry generation and transfer activities promoted by CATIE.
- At least 600 families have incorporated Agroforestry Systems technologies in their production systems.
- Participation of women in the process.

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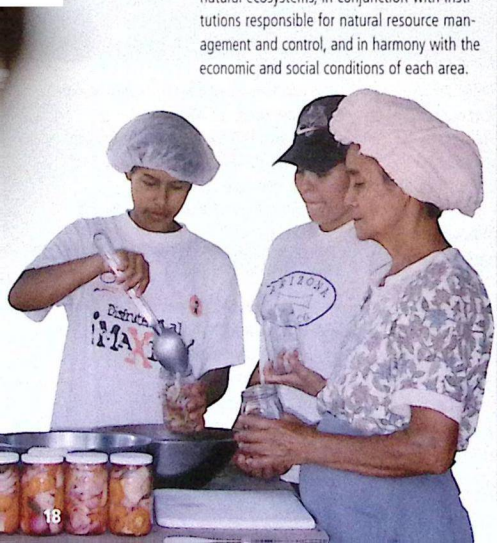
Olafo

Conservation for Sustainable Development (Regional)

Olafo is a project which fosters rural development through appropriate management of local natural resources (wood and non-wood forest products). Work has been concentrated in five agricultural frontier, demonstration areas, where improvements in existing production systems have been introduced. Community participation is stressed; one successful strategy has been the organization of producers groups around production alternatives.

Olafo's principal objective has been to implement models for sustainable management of natural ecosystems, in conjunction with institutions responsible for natural resource management and control, and in harmony with the economic and social conditions of each area.

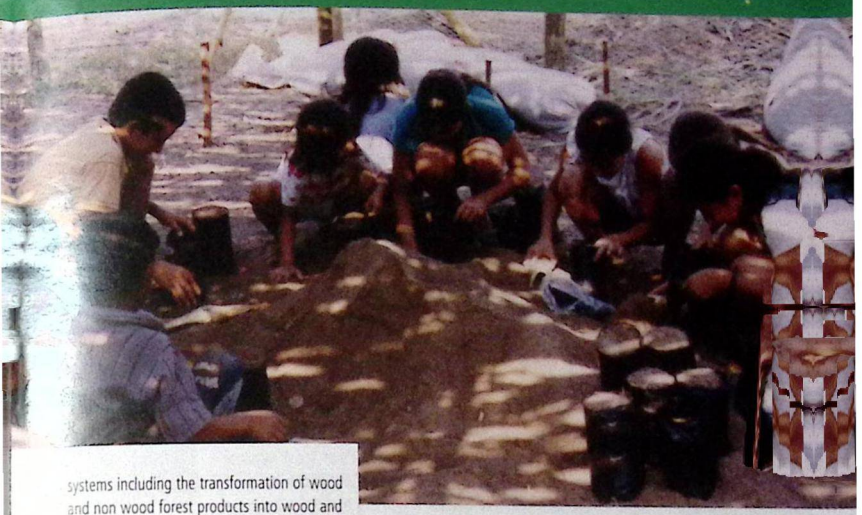


Olafo/Honduras Project in execution 1995-2001

Presently, training, technical assistance and cooperation are provided to the communities of San Ramon, Nueva Granada and Brisas del Norte. The project aims to contribute to improvements in family level production systems and to the efficiency of community organizations. Both objectives are necessary to achieve sustainable use of local natural resources.

Impact

- Diversification of community production systems. In Honduras, for example, bee-keeping, dairy goat production, and new species and varieties in home gardens were introduced.
- Strengthening of organizational community structures in order to carry out forest management.
- Increases in family income.
- Introduction and adoption of agricultural practices which conserve soil.
- Local reduction of illegal logging.
- Changes in the perceptions of forests as a source of income.
- Formation and continuous actualization of local human resources in sustainable agriculture, natural resource management and related topics.
- Indigenous reserves (Talamanca, Costa Rica and Teribe Valley, Panama) strengthened their organizations, improved their production



systems including the transformation of wood and non wood forest products into wood and fiber handicrafts.

- Implementation of a development model based on natural ecosystems management with local communities.

Work is based on community participation, in harmony with sustainable natural resource management

Beginning date:	February, 1989
Ending date:	June, 2001
Total amount:	US$ 11,613.677
Project duration:	12 years
Geographical area:	Petén in Guatemala (ended in 2000). Pacific coast of Nicaragua (ended in 2000). Talamance in Costa Rica (ended in 1995). Bocas del Toro in Panama (ended in 1997). San Ramon, Nueva Granada and Brisas del Norte, in the Municipality of Jutiapa, Atlantida, Honduras.
Beneficiaries of OLAFO/Honduras:	Producers in these communities, municipalities, schools, non governmental organizations
Counterpart institutions for OLAFO/Honduras:	COHDEFOR, COAHTLAL, Jutiapa Municipality

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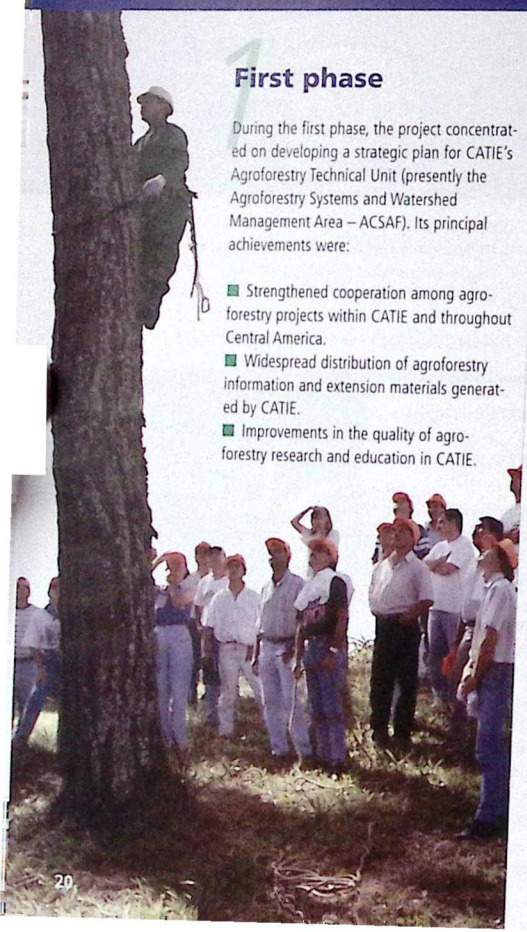
DANIDA/AF
Agroforestry
(Regional)

We would like to see a significant proportion of Central American producers using viable agroforestry practices



1 First phase

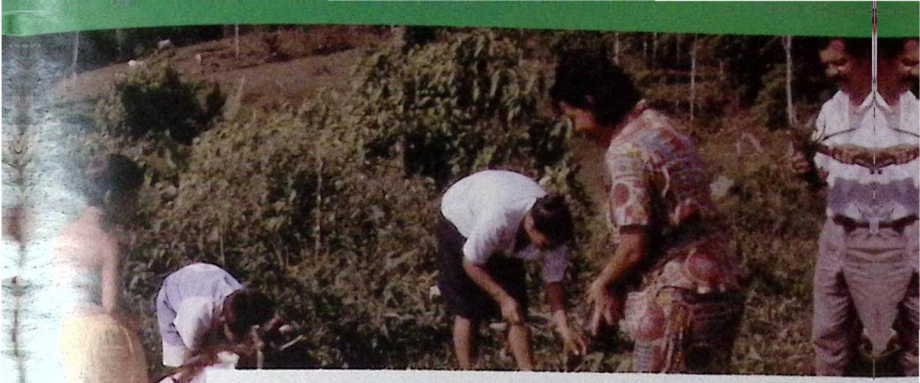
During the first phase, the project concentrated on developing a strategic plan for CATIE's Agroforestry Technical Unit (presently the Agroforestry Systems and Watershed Management Area – ACSAF). Its principal achievements were:

- Strengthened cooperation among agroforestry projects within CATIE and throughout Central America.
- Widespread distribution of agroforestry information and extension materials generated by CATIE.
- Improvements in the quality of agroforestry research and education in CATIE.

2 Second phase

Presently, the project is dedicated to developing agroforestry networks in five Central American countires (Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua); improve governmental and non governmental organizations' capacity in the countries to generate and disseminate agroforestry technologies; strengthen ACSAF's General Coordination and support the Agroforestry in the Americas Journal.

This project's activities and achievements have helped CATIE to become the Latin American leader in agroforestry education, research, training and technical assistance.



Impact

- Consolidation of five agroforestry networks in Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua, to ensure the continuous development, promotion and application of agroforestry technologies.
- Training of technicians in the national agroforestry networks in applied agroforestry research methods, technical writing, and the management, monitoring and evaluation of agroforestry proposals and projects.
- Field technicians (26) 2,484 producers participated in training activities in 2000.
- Publication of numerous practical documents on the management, characteristics, productivity and benefits/limitations of traditional and recently developed agroforestry systems in the five countries.
- Training of over 600 technicians in agroforestry topics.
- Establishment and development of eight small projects for applied research.

Beginning date:	July, 1992
Ending date:	June, 2001
Total amount:	US$ 2,114.332 (Fase I y Fase II)
Project duration:	9 years
Geographical area:	Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua
Number of staff:	6
Beneficiaries:	Governmental and non governmental organisms, producers in the five member countries.
Counterpart institutions:	Petén: Petén University Center (CUDEP), GuacaMayan Foundation; El Salvador: University of El Salvador (UES) and CENTA; Honduras: DICTA and IHCAFE; Nicaragua: UNA and INTA; Costa Rica: DECAFOR/MINAE and ECAG.

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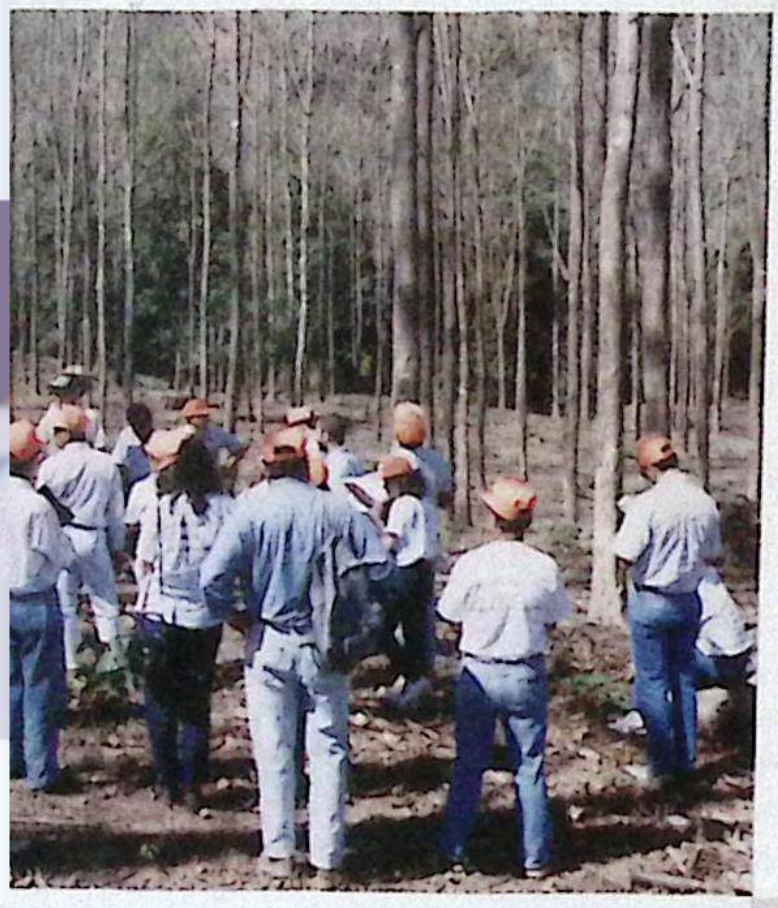
During Phase I (1992 to 1998), the principal activities centered around strengthening seed banks, selection and management of seed sources and training personnel in production, collection, processing, storage and marketing of tree seeds.

In Phase II (1999 to 2001), follow-up is given to achievements of Phase I. Emphasis has been given to creating a general awareness and understanding among higher authorities and consumers, of the importance of using registered seeds to increase plantation quality and productivity and the role of seedbanks in insuring the availability of this invaluable commodity. The principal objective has been to encourage member countries to use physiologically sound and genetically improved forest seeds in reforestation projects.



Impact

Phase I:

- In seven countries, 310 sources of 7 priority species have been put into production.
- Training of 1,378 technicians in the selection and management of seed sources and seed collection and management.
- 52 research studies on collection costs, seed processing and plant reproduction techniques.
- Production of over 140 scientific, technical, academic and popular publications.
- Increases in the use of improved forest seeds.

The project has contributed to strengthening reforestation programs and to an increase in the production and use of improved seeds in member countries

Beginning date:	October, 1992
Ending date:	June, 2001
Total amount:	US$ 4,365.401
Project duration:	8 years, 7 months
Geographical area:	Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panamá and Dominican Republic
Financing:	CATIE / Danida
Number of staff:	7
Beneficiaries:	Seed banks in the region, forestry technicians
Counterpart institutions:	**In Guatemala:** the General Forestry Directorate (DIGEBOS), **In El Salvador:** General Natural Resources Directorate

- Integration and strengthening of nearly all the seed banks in the Regional Forest Seed Bank Network for Central America (REMSEFOR), directed by CATIE's Forest Seed Bank.
- Seed bank personnel trained in the selection and management of seed production stands and in the collection, processing, evaluation, storage, distribution and marketing of diverse seed sources.
- Implementation of a common system to classify seed sources.
- 308 approved and registered sources in the countries.
- Production and dissemination of information (530 documents).

Phase II:

- Users are aware of the importance of using improved seeds.
- Increase in the number of hectares established with seedlings produced from improved seeds, in relation to the total area planted.

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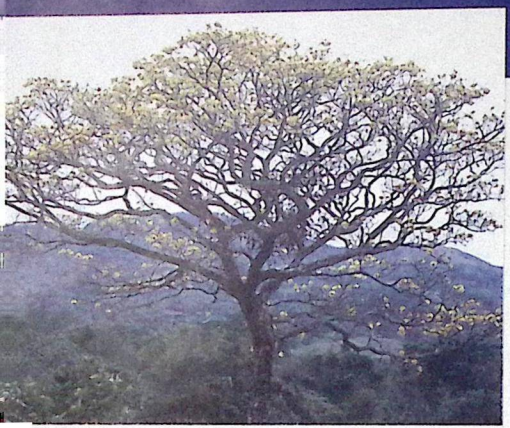
CATIE/ GTZ NOQ

Non Chemical Control Project

(Regional)



Fostering environmentally sound and sustainable agriculture in Central America

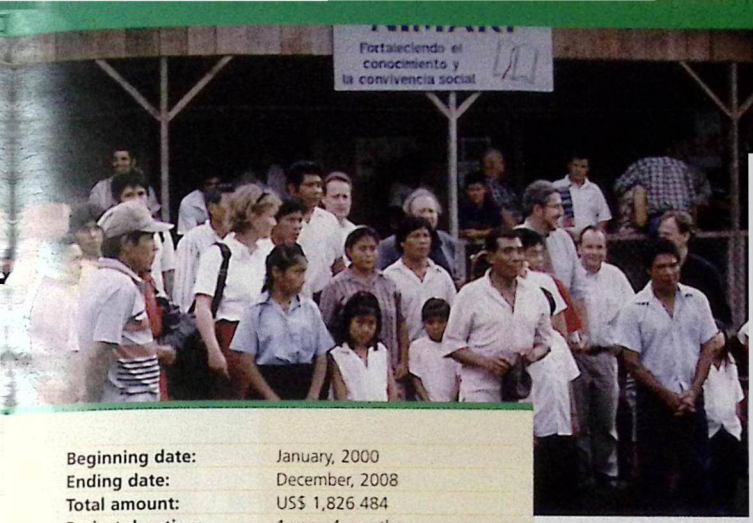
This project is part of a trans-regional plan which fosters agriculture that protects natural resources. Utilizing this guiding principle, the project supports small and medium businesses in Central America, in their efforts to develop and market alternative plant protection processes and products and increase their availability to consumers.

This project also offers additional support to the region through its efforts to stabilize and improve the sustainability of agricultural production. The project strives to improve crop production potential, as well as income to the agricultural community.

Among its most important activities, are planning workshops with private businesses, training courses and sharing of experiences between private and public sectors.

Impact

- Small businesses acquire specialized knowledge in the production, quality control and marketing of non-synthetic, plant protection products.
- Increases in rural families' demand for non-synthetic, plant protection processes and products.
- A legal framework which stresses the use of non-synthetic, plant protection products in the region.
- Increases in the exchange of information on non-synthetic, plant protection products among the institutions involved (creation of CATIE's Web page: http://catie.ac.cr).



Beginning date:	January, 2000
Ending date:	December, 2008
Total amount:	US$ 1,826 484
Project duration:	1 year, 4 months
Geographical area:	Central America
Number of staff:	4
Beneficiaries:	Central American communities dedicated to agriculture.
Counterpart institutions:	CATIE, Private sector, Bio Control,S.A., BIOLAB S.A., LAICA, BIECA

We seek to improve technical cooperation at the institutional level

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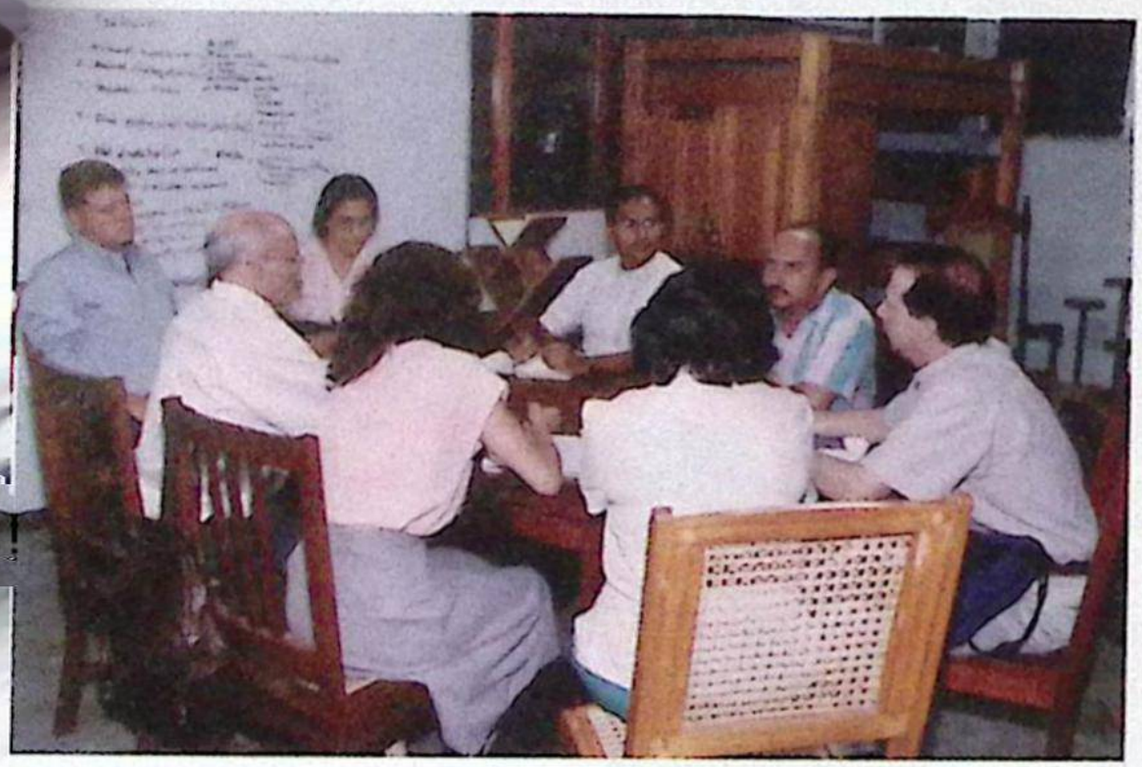
More agile, modern, participatory and decentralized institutional management; better coordination and internal sharing of information

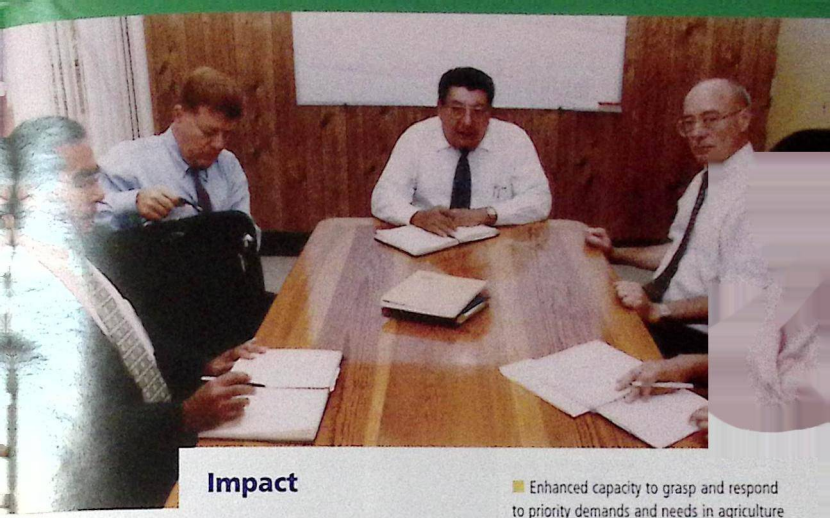


SIMO was created to strengthen CATIE's managerial and outreach activities. The first phase includes an analysis of the perception that CATIE's principal clients and stakeholders have of the Center's activities in member countries. From this study operational recommendations are being derived to improve the performance and impact of the institution, including its national representations.

SIMO aims to evaluate the demand of CATIE's priority stakeholders in each member country including current and potential products and services offered by the institution in diverse technical areas. This study will provide vital information to aid the development of CATIE's new Institutional Strategic Plan 2002-2012.

SIMO strengthens the principal functions of the national representations

- Foster coordination and cooperation among CATIE's projects executed in each country.
- Provide support to technical cooperation and feedback mechanisms of great interest to CATIE, such as the National Advisory Committees (CANs), alumni associations and networks.
- Carry out an ongoing strategic analysis to identify opportunities for CATIE's services and to recognize, in an opportune fashion, threats to institutional efforts.



Impact

CATIE's possesses an efficient, innovative and participatory management capacity to aid decision-making in each country and to facilitate greater interaction among research, education and outreach functions.

Enhanced capacity to grasp and respond to priority demands and needs in agriculture and in programs encompassing environmental concerns; achieve a greater influence in institutional development and in political-legal domains in the countries, and demonstrate more commitment to regional development processes.

Systematization and exchange of information on technologies of proven value and on effective outreach and cooperation tools and methodologies, in conjunction with partners and counterparts in the region.

National representations and projects carefully follow-up planned activities including the evaluation of results and impacts, in conjunction with local partners. These national representations also promote feedback for decision-making.

Beginning date:	March, 2000
Ending date:	**Phase I:** June, 2001 **Phase II:** July, 2001 to June, 2003 (currently under negotiation)
Total amount:	US$ 983.000 (Phases I and II)
Project duration:	1 year, 2 months
Geographical area:	El Salvador, Guatemala, Honduras and Nicaragua
Number of staff:	4
Beneficiaries:	**Within CATIE:** national representations, projects in the countries, management personnel. **External to CATIE:** alumni, members of networks, project beneficiaries and counterparts.
Financing:	Danida

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SMILAX

Development and Sustainable Management of Smilax spp. in Natural and Agroforestry Ecosystems in Central America (Regional)

This project promotes the sustainable use and commercialization of a medicinal plant, smilax, native to tropical America. This plant has widespread traditional use by communities and also by the global pharmaceutical industry.

The project conducts applied and participatory research to learn more about the plant's taxonomy, ecology, chemistry, transformation and marketing. The resulting knowledge should allow scientists to select the species or populations of smilax with the greatest potential for use in natural and agroforestry ecosystem management systems.

A model for the conservation and use of non timber products from tropical forests and, in particular, medicinal plants.

Specific objectives

- **Research the taxonomy and biology of Smilax spp.** in Central America, with the intent to develop management criteria and establish sustainable use systems.
- **Identify variations in the concentrations, quantity, quality and biological characteristics of important biochemicals present in Smilax spp.** to determine the most promising species of the genus.
- **Develop management guidelines for Smilax spp.** within two principal strategies: (1) enrichment and sustainable use in natural areas and (2) establishment of promising species within agroforestry systems.
- **Promote organization of community groups to produce Smilax spp.** and identify favorable national and international markets.

Beginning date:	June, 2000
Ending date:	June, 2002
Total amount:	US$ 250.000
Project duration:	10 months
Geographical area:	Central America, with emphasis in Costa Rica and Nicaragua.
Number of staff:	12
Beneficiaries:	Technicians in participating institutions. Graduate students and participants in CATIE's training courses, producers and businessmen.
Financing:	Regional Fund for Agricultural Technology (FONTAGRO) of the Interamerican Development Bank.
Counterpart institutions:	Costa Rican Institute of Technology (ITCR), San Carlos campus; Research Center for Natural Products, University of Costa Rica; National Autonomous University (Nicaragua); Biological Testing Laboratory (University of Costa Rica).

Impact

- Enhanced knowledge about a commercial valuable tropical species: its ecology, biochemical attributes, production systems and marketing strategies.
- Development and testing of viable management guidelines for Smilax spp. from social, economical, ecological and legal perspectives in natural forests and in agroforestry systems.
- Technicians representing diverse institutions possess greater knowledge and criteria for the conservation and sustainable use of natural resources.
- Rural populations possess new productive alternatives.
- Enhanced quality of medicinal products marketed to consumers.
- New indigenous products incorporated in the market.

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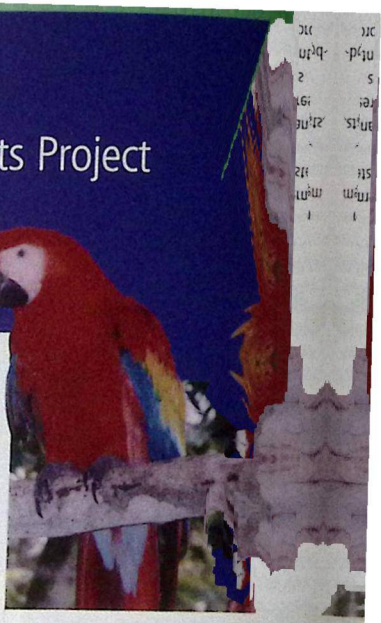
PROSIBONA

Silviculture of Natural Forests Project (Costa Rica and Panama)



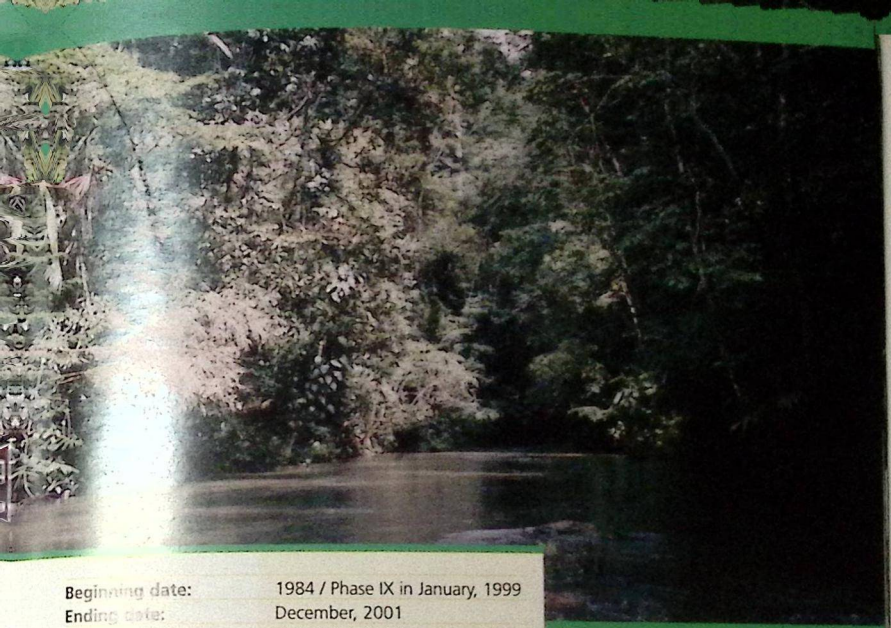
Pioneers in the generation of information about humid tropical forests

The Silviculture of Natural Forests Project includes ecological and silvicultural components, financial and socioeconomic research, relative to the management of primary and secondary forests in mountainous and lowland regions, with emphasis in Costa Rica. Presently, the project is in its ninth and final phase (1999-2001).

Since its initiation, PROSIBONA has produced and disseminated information from pioneering work on the response of different types of humid forests to silvicultural treatments. This information has served to develop mathematical growth and yield models, which aid decision-making processes within the forestry sector.

Impact

- Establishment of a network of long-term research sites and a forest monitoring system in the region.
- Validation of proposed operational management models for different types of forests.
- Strengthening of strategic partnerships with national institutions, to carry out joint research on wood and non wood forest products.
- Consolidation of a cooperative production enterprises in the mountainous region where the project operates. This enterprise possesses an explicit gender focus.
- Strengthening of outreach strategies directed to organizations of small and medium producers.
- Training of forestry professionals in Central America.



Beginning date:	1984 / Phase IX in January, 1999
Ending date:	December, 2001
Total amount:	US$ 400.000 (Phase IX)
Project duration:	16 years
Geographical area:	Mountainous forests of Talamanca Range (Villa Mills) and in five humid forests: Tirimbina, Corinto, Florencia and Pilar de Cajón, in Costa Rica and Guabito and Bocas del Toro in Panama.
Number of staff:	5
Beneficiaries:	Governmental institutions and non governmental organizations, persons in charge of sustainable forest management in the region. ASOPROFOR (Association of Forest Producers in the mountain forests of Villa Mills). ADESMON (Association for the Sustainable Development of Mountain Forests)
Counterpart institutions:	National System of Conservation Areas (SINAC, Costa Rica), MINAE
Financiamiento:	Swiss Development and Cooperation Agency (COSUDE)

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PROSIBONA generates and disseminates knowledge necessary for sustainable timber production

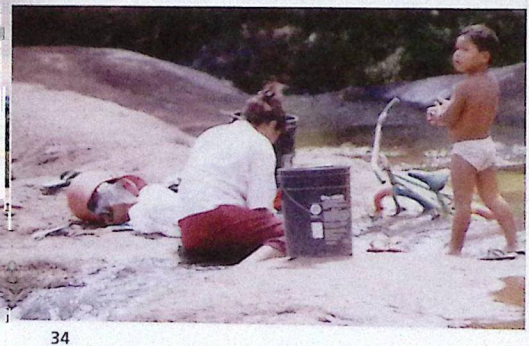
Lempa

Management Plan for the Tri-national Lempa River Watershed (El Salvador, Guatemala and Honduras)

This project will lay down the foundations necessary for the establishment of agreements between El Salvador, Guatemala and Honduras, countries which share the Tri-national Lempa River Watershed

This project is divided in two components:

Lempa River Watershed Management Plan.
This component involves the development of a strategic plan to manage natural resources and prevent disasters in high risk areas threatened by flooding and landslides in the Tri-national Lempa River Watershed. This is a pre-investment project which will lay down the foundations for the establishment of agreements between El Salvador, Guatemala and Honduras, countries which share the watershed.



This project seeks to directly benefit populations in both the upper and lower portions of the watershed who are affected by natural disasters, and indirectly the entire population in the area through enhanced environmental services and eventual actions from future projects.

Two important achievements to date involved the diagnosis and characterization of many attributes of the watershed.

Geographical Information System for natural resource management and disaster prevention in the Tri-national Lempa River Watershed.
The objective of this component is to promote an invaluable tool to aid decision-making, which will be useful to authorities in all three countries, for improved natural resource management and disaster prevention in the Lempa River Watershed.

This component also involves considerable effort to train national institutions and authorities in the use of GIS.

Impact

Reduce vulnerability to natural disasters such as floods and landslides and encourage improved natural resource management.

- Establish a framework for successful watershed management in transnational watersheds.
- Elaborate guidelines and strategies that permit the countries to establish agreements among themselves to manage renewable natural resources appropriately; prevention and management of natural disasters and integrated management of water resources. The underlying concept for this work is "integrated watershed management".

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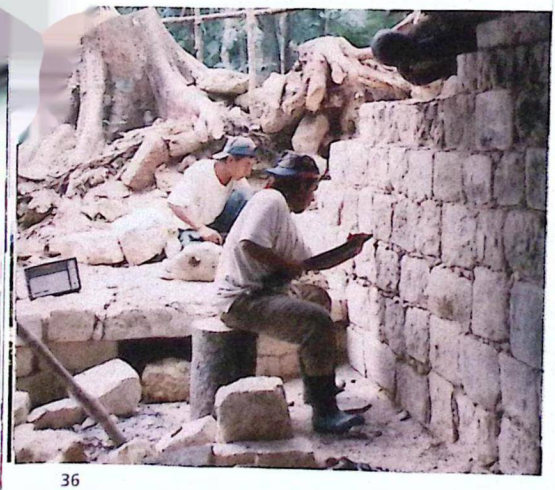
Beginning date:	Watershed management Plan: February, 2001 GIS: November, 2000
Ending date:	Watershed management Plan: July, 2001 GIS: October, 2001
Total amount:	US$ 380.000
Project duration:	Watershed management Plan: 3 months GIS: 6 months
Geographical area:	The entire Lempa River Watershed (18,007 km^2), in El Salvador (9,753.9 km^2), Honduras (5,690.8 km^2) and Guatemala (2,562.4 km^2)
Number of staff:	8
Beneficiaries:	Approximately 5,000,000 inhabitants of the watershed. Institutions that participate in training activities.
Counterpart institutions:	Ministries of the Environment and Ministries of Natural Resources in El Salvador, Guatemala and Honduras.

PDS

Petén Sustainable Development Program (Guatemala)

The Petén Sustainable Development Program (PDS) promotes a series of actions that contribute to the sustainable management of natural resources and the preservation of cultural patrimony in Petén.

800 families will be trained in business management and organization

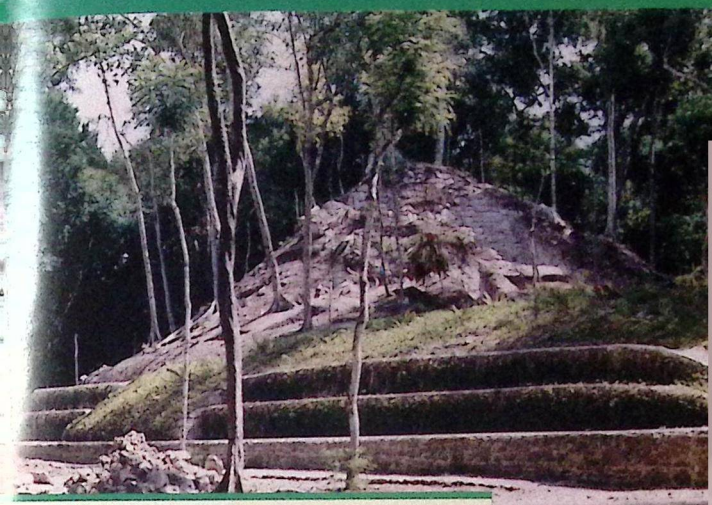


The Program seeks to define land ownership in the buffer zone of the Mayan Biosphere Reserve (MBR), restore archeological sites, support ecological tourism, develop pilot projects for sustainable agriculture, forestry protection and management. It also seeks to strengthen governmental institutions, municipalities and grassroots organizations.

These actions seek to promote new economically viable options for producers from low income communities and define ownership of their lands.

Impact

- 4,500 families with legalized property titles.
- 60 producers with standardized, monitored research plots.
- 400 members of grassroots organizations and six co-implementing institutions trained in administration, finances, project planning, community organization and participation and environmental training.
- Five community organizations trained in tourism enterprises.
- Adjudication to legalize 45,000 hectares.
- International petition to excavate and restore archeological sites in Yaxha and Aguateca.
- Convocation and adjudication to design tourist infrastructure.



Beginning date:	November, 1998
Ending date:	December, 2002
Total amount:	US$ 22,000.000
Financing:	Interamerican Development Bank (IDB) and Guatemalan Government
Project duration:	2.5 years
Geographical area:	Municipalities of Flores, La Libertad, Melchor de Mencos, Dolores, Poptún and Sayaxhe
Number of staff:	13
Beneficiaries:	Up to 4,500 families with legalized property titles, 800 families from 14 communities assisted by national representations. 400 people from grassroots organizations.
Counterpart institutions:	MAGA, CONAP, IDAEH, INGUAT, MINEDUC, Region VIII, FONTIERRA, Municipalities of Flores, La Libertad, Melchor de Mencos, San Benito, Poptún and Sayaxhe.

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One of our principal goals is to make land legalization compatible with natural resource management

PROMA

Environmental Monitoring of Motagua and Polochic Watersheds Project

(Guatemala)

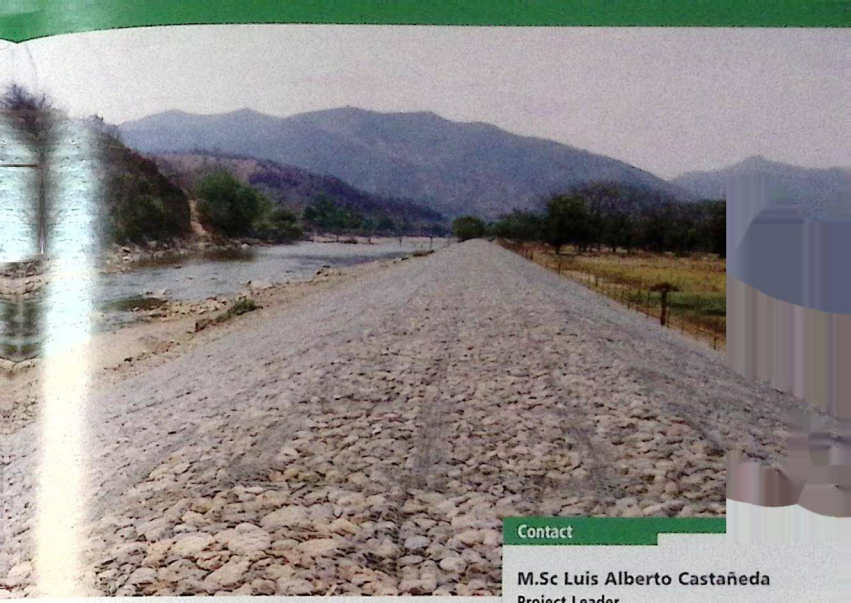
The purpose of this program is to construct structures to protect the banks of the Motagua and Polochic Rivers in Guatemala, rehabilitate lands, maintain important irrigation and roadway infrastructure and protect populations vulnerable to floods.

CATIE is responsible for conducting an environmental follow-up program to analyze each of the structures financed by USAID and installed in the indicated watersheds, to determine whether the structures comply with standards designed to minimize the impact of environmental risks, and to ascertain the degree of their effectiveness.

The project also prepares personnel for the conduction of studies to reduce environmental, social and economic vulnerability of the watersheds. For this reason, the program includes four scholarships for Guatemalan students to carry out Masters level programs in CATIE, in integrated watershed management.

Impact

- A proven environmental monitoring system that can be applied to projects operating in similar conditions.
- Characterization of principal impacts of Hurricane Mitch, and a general description of practices and physical structures used to control torrential floods.
- Technical manual on physical structures for watershed stabilization.
- Follow-up and evaluation system, applied to existing structures and those under construction.
- Economic evaluation of the most significant impacts caused by Hurricane Mitch and their consequences within affected populations in the Motagua River Watershed.
- Reports on environmental problems associated with the construction of structures, including recommendations for modifications and warning systems.
- Study of regenerative processes associated with the structures.



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The project developed system to monitor and evaluate environmental impacts of structures designed to protect and redirect waterways

Beginning date:	April, 2000
Ending date:	September, 2001
Total amount:	US$ 218.000
Project duration:	1 year
Geographical area:	Motagua and Polochic River Watersheds, Guatemala
Number of staff:	4
Beneficiaries:	Villages and producers in the proximity of these areas.
Counterpart institutions:	USAID-Guatemala

CATIE/CONAP

ional Protected Areas Advisory

temala)

The CATIE-CONAP project offers technical assistance to the National Protected Areas Advisory (CONAP) to promote the forest concession system in the Multiple Use Zone (MUZ) of the Mayan Biosphere Reserve (MBR).

Of the almost 300 thousand hectares of community managed, natural forests that have attained international certification worldwide, 100 thousand are located in the Mayan Biosphere Reserve.

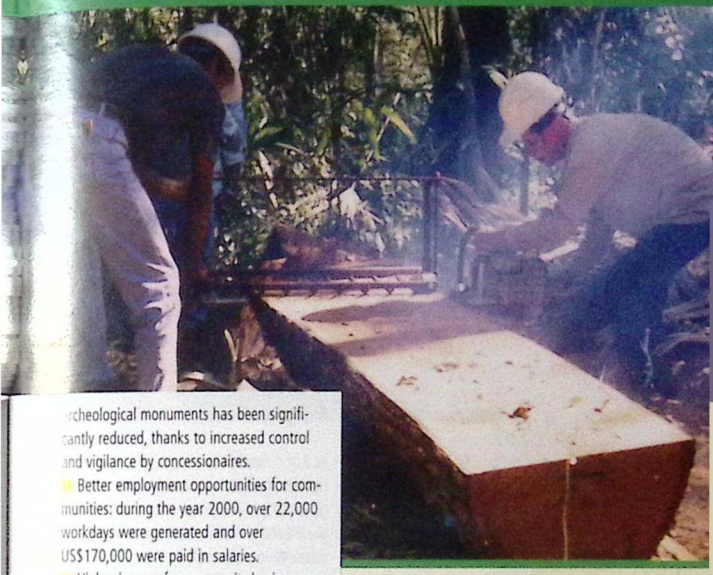
The advancement of the agriculture frontier, illegal logging, and the plundering of archeological monuments gave rise to this initiative. Recognizing the limitations of direct public sector control, CONAP opted to share administration of the MUZ, through the granting of Management Units, stipulated within legal concessions for integral, renewable natural resource use.

The MUZ possesses an area of 840 thousand hectares, the majority of which is covered by tropical broadleaf forests. Concessionaires have exclusive use rights under sustainable management systems for wood and non wood forest resources, as well as the responsibility to safeguard their conservation and protection.

Impact

The achievements mentioned below are shared with other projects, organizations and individuals, many of which were assisted by CATIE/CONAP.

- Organized the legal occupation of nearly the entire Multiple Use Zone: this land-use scheme takes into account the existence of biological corridors, special use areas, natural and cultural monuments and management units already under concession.
- Forest fire control: fires during the year 2000 affected less than 1% of the total area under concession, compared to 22% of the land affected in core regions of the MBR (COE 2000).
- Advancement of the agriculture frontier detained: in the MBR, the deforestation rate decreased from 0.36% in 1995-1997 to 0.12% in 1997-1999.
- Integrity of ecosystems safeguarded: invasions, deforestation, illegal logging, disorderly use, intensive hunting and plundering of



rcheological monuments has been significantly reduced, thanks to increased control and vigilance by concessionaires.

- Better employment opportunities for communities: during the year 2000, over 22,000 workdays were generated and over US$170,000 were paid in salaries.
- Higher income for community businesses: the average daily wage of community members during the year 2000 was US$6.20. This amount was nearly double the amount paid to agricultural workers in other parts of the region.
- Development of community infrastructure: community profit has financed important projects of social benefit (roads, health centers, schools, community centers, potable water, etc.).
- Changed attitudes and perceptions of the forest, which is no longer perceived as an obstacle, but rather as a provider of goods and services which must be preserved.

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Beginning date:	October, 1995
Ending date:	March, 2001
Total amount:	US $ 2,641.406
Project duration:	5.5 years
Geographical area:	Multiple Use Zone (MUZ) of the Mayan Biosphere Reserve, in Petén, Guatemala.
Number of staff:	6
Beneficiaries:	over 6000 people residing in the MUZ and adjacent areas.
Counterpart institutions:	CONAP (operates with funds from the US Agency for International Development, through the Mayan Biosphere Project; Nature for Life Foundation; Mayan Center Association, CI/Pro-Petén, Forest Communities Association of Petén (ACOFOP)

Chixoy

Management and Conservation of Renewable Natural Resources in the Chixoy River High Watershed (Guatemala)

Located in Santa Cruz de Quiché, Guatemala, this project was one component of the Renewable Natural Resources Management and Conservation Project carried out by the Ministry of Agriculture in the Chixoy River Watershed, and financed by the Government of Guatemala and the Interamerican Development Bank (IDB).

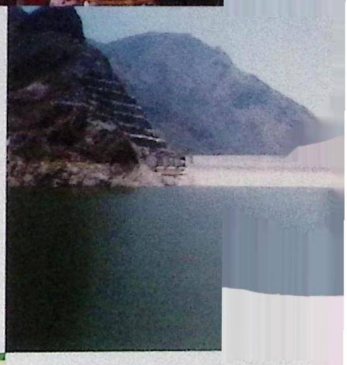
The project's main task was to incorporate 3,000 families living in the Upper Chixoy River Watershed in forestry activities. To achieve this, project personnel planned and held meetings, lectures, seminars and educational trips, and published documents for training activities.

Impact

- 3,100 rural families involved in agroforestry and forestry activities.
- The project sought to maximize community participation involving over 100 local forestry promoters or facilitators from participating communities. A gender focus was incorporated in each of the 39 promoted activities.
- Over 1,300 agroforestry extension and promotional activities (community meetings, lectures, films and educational trips, field days, farm visits and short courses).
- Construction and distribution of 6,000 fuel efficient, wood-burning stoves.
- Creation of 107 community nurseries.
- Production of over 1,600,000 forest seedlings (conifers and broadleaf trees).
- Reforestation of 800 hectares.

Over 3,100 rural families involved in forestry activities

- Over 100,000 fruit trees planted.
- Implementation of over 1,300 hectares of agroforestry systems.
- Establishment of over 123 hectares of demonstration plots within agroforestry and silvopastoral systems.
- Establishment of over 78 hectares of productive forest plots (resin, seed stands, thinning, cutting for natural regeneration and prescribed burns).



Beginning date:	September, 1995
Ending date:	November, 1998
Total amount:	US$ 2,200.000
Project duration:	3 years, 3 months
Geographical area:	Chixoy River High Watershed, which covers the Baja Verapaz, El Quiché, Totonicapan and Huehuetenango Departments in Guatemala.
Beneficiaries:	Communities bordering the Chixoy River Watershed.
Counterpart institutions:	UNEPROCH, Executing Unit of the Chixoy Project, registered with the Ministry of Agriculture, Livestock and Food (MAGA).

Important participation of women and children

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POSAF
Socio-environmental and Forestry Development Program (Nicaragua)

The program provides technical assistance to groups and individuals, training and the establishment and management of production systems

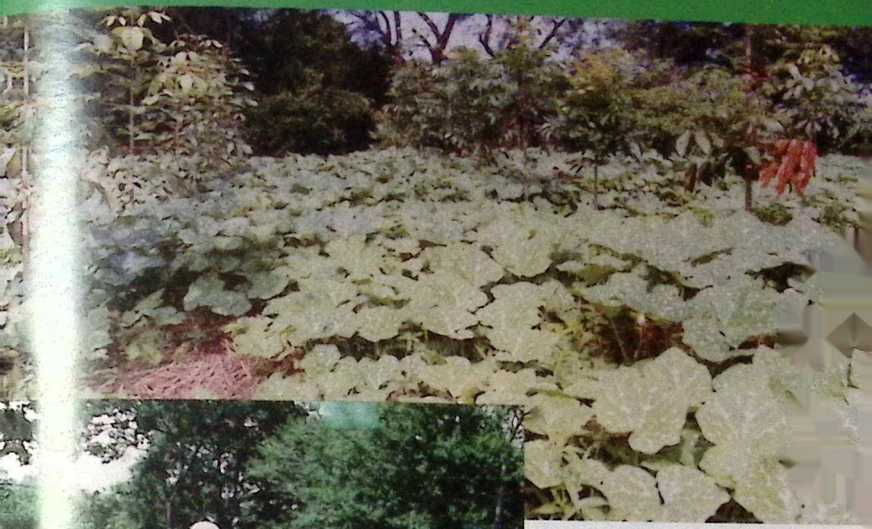
POSAF seeks to reduce environmental degradation and its corresponding socioeconomic impacts, manifested in high poverty rates, in the Río Grande Watershed, Carazo, Nicaragua. It includes three sub-programs: natural resource management and recuperation, conservation of protected areas and institutional strengthening.

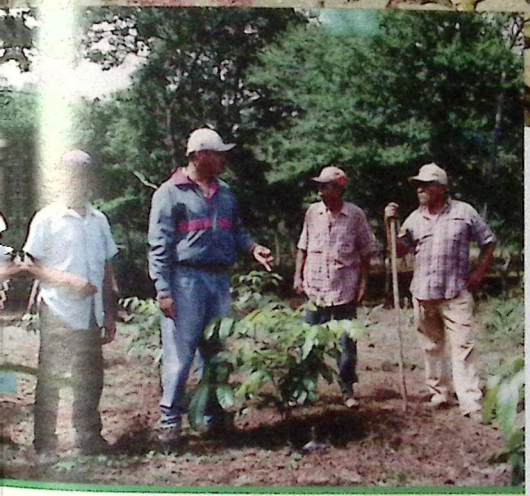
The project began in 1996. In 1998, CATIE joined the project as one of its collaborating organizations.

Its objective is to promote, through technical assistance to groups and individuals and financial assistance, sustainable farm production systems and contribute to improving natural resource use. It aims to reduce environmental deterioration and generate higher incomes for small producers.

To achieve these goals, POSAF carries out the following activities:

- Establishment of forest plantations to protect degraded and streamside areas.
- Implementation of agroforestry systems on farms.
- Establishment of silvopastoral systems in areas where there is extensive livestock production.
- Encouragement of natural regeneration in protected areas and others which show productive potential under sustainable management.
- Train and offer technical assistance to farmers to contribute to the sustainability of their production systems.
- Provide financial assistance to small producers needed to stimulate production and/or improve their farms.
- Improve and consolidate community organizations, to strengthen economic and environmental management.





Impact

- 51 producers with improved quality of life and enhanced awareness of the benefits derived from rational natural resource use.
- Recuperation of shrub and forest species.
- Application of appropriate agricultural practices.
- Entities assuming greater responsibility for maintaining strict control of forest use (fuelwood and timber).

Beginning date:	April, 2000
Ending date:	December, 2001
Total amount:	US$ 181.472
Project duration:	1 year
Geographical area:	588 hectares covering communities in the Diriamba, Jinotepe, Santa Teresa and La Conquista Municipalities, Nicaragua.
Beneficiaries:	51 producers
Counterpart institutions:	IDB, FND, Nicaraguan Government and SIDA

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Secondary Forests

Sustainable Management of Secondary Forests by Rural Communities in the San Juan River Area (Nicaragua)

The Sustainable Management of Secondary Forests by Rural Communities in the San Juan River Area project is a follow-up to the Regional Secondary Forests Project, sponsored by CIFOR and CATIE, which ended in 1999.

This project dedicates efforts to the selection and validation of secondary forest management options. In addition, once markets are identified and the profitability of alternative management options are evaluated, the project works with producers to achieve added value to forest products through processing and commercialization.

The favorable commercialization of products derived from management: an essential part of forest production

Project activities are divided into three basic components:

- On-farm, participatory secondary forest management involving the selection and implementation of productive management options.
- Technical assistance to increase local technical capacity for secondary forest management.
- Identification and promotion of necessary changes in policies and guidelines designed to regulate secondary forest management to encourage sustainable management initiatives.

Impact

With less than a year of execution, principal results obtained by this project include:

- A growing number of secondary forests in the San Juan River area in Nicaragua are managed under sustainability criteria contributing to rural and urban well-being: financial benefits

for rural producers and consumers, and environmental benefits for society.

- General guidelines have been developed for sustainable secondary forest management, based on biophysical, socio-cultural and economic conditions at each site. These guidelines will be used in future certification initiatives.
- Secondary forest areas are being managed with established biophysical, socio-cultural and economic monitoring systems. These forests will serve as demonstration areas for further management of secondary forests in the region.
- Producers and technicians trained to manage secondary forests.
- Local and regional institutions possess necessary knowledge to manage secondary forests.
- Recommendations for political changes and laws that favor the adoption of productive secondary forest management systems have been proposed.

Beginning date:	December, 2000
Ending date:	December, 2001
Total amount:	US$ 83.750
Project duration:	5 months
Geographical area:	San Carlos and San Miguelito Municipalities in the San Juan River area, Nicaragua.
Number of staff:	7
Beneficiaries:	10 forest producers and technicians in the San Juan River area (training), students from UPONIC, UCA, CATIE and other communities (management guidelines).
Counterpart institutions:	Central American University, Managua (UCA), Universidad Popular in Nicaragua (UPONIC), World Bank Forestry Program, Ministry of Agriculture and Forestry (MAG-FOR).

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Final Notes

Producers, and their local organizations, have embraced and adopted tree species planting and agroforestry practices. These production alternatives now form part of their production systems and contribute to family income. Participatory methodologies carried out by the aforementioned projects and collaborating organizations have been instrumental in bringing about acceptance of new productive alternatives.

A critical mass of hundreds of field technicians and thousands of producers has been formed, which continues to apply and disseminate acquired skills.

The political, legal and institutional environment has become more favorable for sustainable natural resource management. For example, there is greater concern among governments and the civil society to conserve remaining natural forests. This growing concern should stimulate increased demand for timber and fuelwood from plantations and agroforestry systems on farms and more responsible management of natural forests slated for production.

The successful experiences of the Olafo and CATIE-CONAP projects seeking to promote the appropriate use of forest resources in the Mayan Biosphere Reserve in Petén, Guatemala provide many lessons. To achieve forest conservation, the consolidation of the agricultural frontier is essential, as well as forest fire control and land invasions. This control is best accomplished by local rural inhabitants committed to natural resource management and conservation.

The vast array of experiences presented illustrate the importance of complementing activities of each project with efforts at the farm, community and governmental levels. Projects should seek to influence policy decisions that effect the viability of agricultural production and natural resource management and conservation.

Communities can become strong allies for conservation, if their efforts help them meet their basic needs. Their participation in improved management systems and in natural resource conservation broadens their horizons. They take part in training and technical assistance activities, the have a greater opportunity to interact with other social groups, and their voices can be channeled to decision-makers who directly influence their livelihoods.

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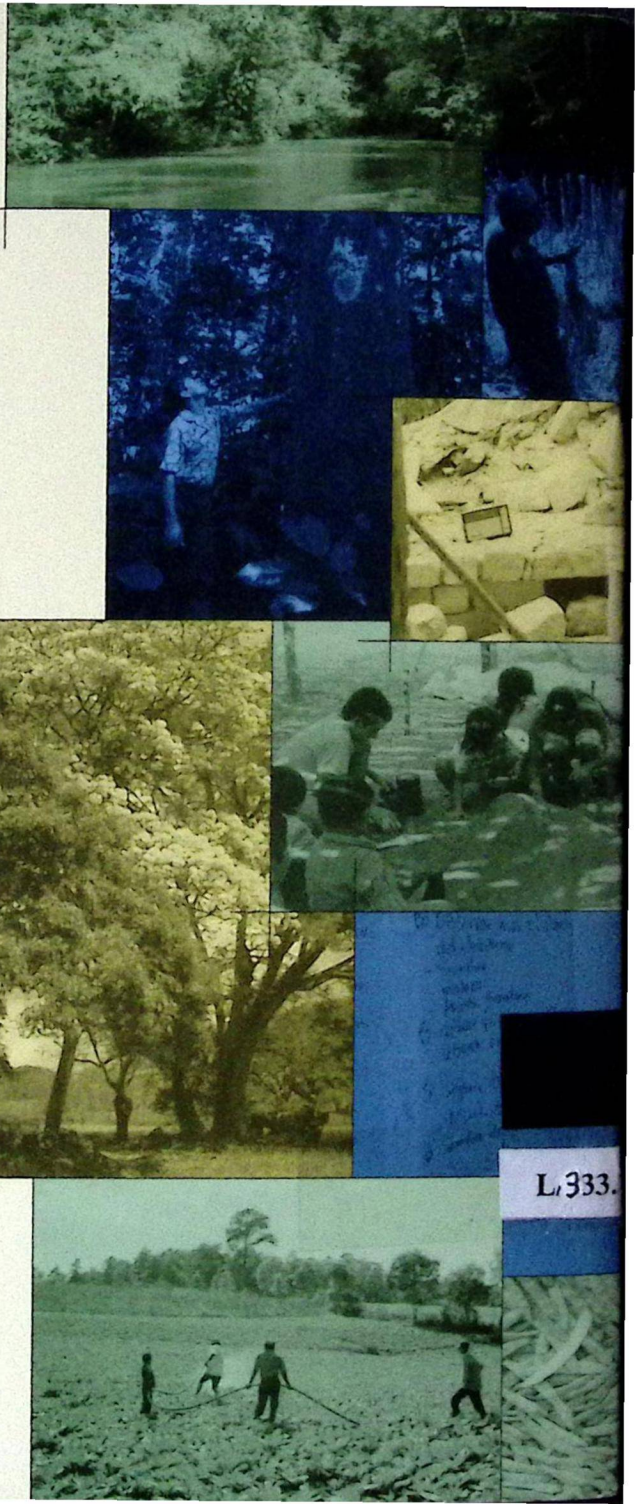

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