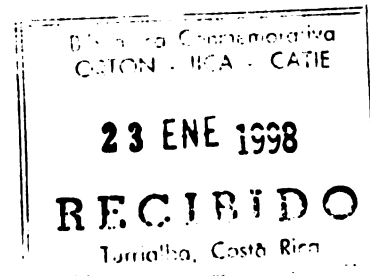


**CATIE**



**TROPICAL AGRICULTURAL RESEARCH AND  
HIGHER EDUCATION CENTER**

**Wise Use of the Mangrove Resources in Estero Real  
(Nicaragua) and Térraba-Sierpe (Costa Rica) -  
Mangrove Project**

***PROGRESS REPORT***

**April - June 1996**

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## 1. INTRODUCTION

This progress report compiles the activities carried out from April 1 to June 30, 1996. A summary of the main activities carried out in Estero Real and support activities developed by OLAFO Project staff at the Headquarters is also included. A structure based on objectives, activities and budget included in the Work Plan 1994-1996 is used.

During this quarter progress on collection and processing of the information required for the Land Use Planning in Estero Real was outstanding. In addition, forest management activities for the group "28 de Julio" were emphasized; this group is also involved in other activities promoted by the Project.

Total budget implementation by the end of the second phase of the project originally defined was 71.81%. During the second year, implementation was 65.74%.

## 2. PROGRESS OF ACTIVITIES

### 2.1. ESTERO REAL, NICARAGUA

#### 2.1.1 Management plans

##### Preparation of forest management plans

In "28 de Julio" Cooperative's management unit an experimental harvest of 2.5 has was carried out under the endorsement of MARENA . Based on the results obtained, a management plan previously negotiated with MARENA will be prepared. .

##### Approval of plans by MARENA

No significant progress was achieved in this activity.

##### Transfer of management techniques to the groups

Beneficiaries from the 28 de Julio group actively participated in the experimental harvest of the cooperative management unit, where 9,811 fuelwood splits were extracted.

Due to the fact that they participated since the beginning (planning the experimental harvest, identification of harvestable trees, etc.) they are learning forest management techniques.

This activity was actively supported by technical personnel from the Headquarters specializing in the forest, economics and organizational fields .

### Monitoring and control system

During the two-week experimental harvest, productive, economic and organizational aspects were monitored intensively. The data was organized in computer spreadsheets, and processing and analysis has been initiated.

### Institutional involvement

Meetings were held with the National Forest Bureau to present the information generated from the experimental harvest, discuss the constraints encountered (in particular current rules on forest management are not appropriate given the mangrove characteristics), and receive the institutional advice. Authorities are still willing to cooperate in the preparation and implementation of the management plan for the "28 de Julio" Cooperative.

MARENA's technical team handling control and regulation of the forest resources visited the harvesting site, facilitating communication and a continual flow of information.

#### 2.1.2. Management strategy for Estero Real

### Involvement plan

Technical personnel from a wide number of linking institutions participating in the preparation of the land use planning was increased: MARENA-Ministry of the Environment and Natural Resources, MEDPESCA-Ministry of Economics and Fisheries, CIRHMEDE-Research Center on Hydrological Resources-Medepesca, UNAN-LEON-Nicaraguan Autonomous National University, UCA-Central American University, MISION CHINA-Chinandega, Piquín Guerrero Project, PNDR-National Program for Rural Development, MAN-Nicaraguan Environmental Movement, SELVA-Ecological Society pro life and the Municipalities of Morazán and Chinandega. Communication mechanisms and links between responsible technical personnel from each institution and the Mangrove Project team were defined in order to stimulate institutional involvement.

### Work plan with the institutions

The different working phases and the expected products were identified in workshops held during this quarter. This activity was particularly important to adjust to institution's expectations as well as to provide some guidance to the project technical team. It was considered necessary to continue implementing these workshops to guarantee a shared common objective among the institutions.

### Preparation of the Strategy

The analysis of the information gathered through institutional and community workshops continues. This has allowed for the preparation of matrices where the different environmental units (uaries, natural lagoons, saltpetre, forests and continental area), social, economic, legal and institutional criteria for the different units are included. A preliminary diagnosis report was prepared.

A preliminary matrix was also prepared for the zoning of Estero Real:

- permanent hydrological zones
- temporary hydrological zones
- retention zones and pluvial water collection
- saltpetre zones
- structural classes of mangrove forest
- continental areas sectors

It was necessary to locate geographically 147 descriptive plots in and out of the mangroves, which will facilitate photointerpretation process of vegetation and soil uses. A previous classification allowed for the identification of 50 kinds of vegetation.

A technical meeting was carried out with different national specialists in order to identify information gaps in the diagnostic process. In addition, the terms of reference terms for a shrimp production consultant were defined. Compilation and exchange of information with national institutions continued.

### 2.1.3. Strengthening of local groups

#### Legalization of local groups

Activity completed.

### Training to groups and families

Training activities for sustainable agriculture techniques have been carried out, with the farmers of Colonia Luis Andino. Exchanging experiences with farmers from other communities using the above mentioned practices are among the most important activities; the most common ones being the use of organic manure, improvement of home gardens, preparation of family nurseries, soil conservation practices and application of integrated pest management to agricultural crops. For the next quarter, the implementation of these practices in the beneficiaries farms has been planned; support from other institutions and organizations (INTA, MAN-SETAGRO, CARE, Pikín Guerrero Project and MARENA) is also expected.

### Group monitoring system

A social diagnostic carried out with the Cooperative "28 de Julio" group provided input as to the feasibility of applying a management plan and obtain a forest concession. The problems identified are mainly due to internal divisions caused by the use of commonly owned equipment. The problem originates from inefficient leadership and lack of ability to control this situation. The necessary steps to solve these problems are being taken.

A satisfactory integration of the fuel woodcutters of the 28 de Julio group was achieved to carry out the forest inventory and for the forest harvest.

#### 2.1.4. Alternative income sources

#### \*Design and validation of production alternatives

**Iguana production:** technical assistance for this activity continues. The most important achievements include a decrease in mortality rate, the production of 2500 young iguanas from 1300 adults and a satisfactory implementation of the budget on the part of the producers. In the latter case there have been problems satisfying feeding needs due to a commercialization delay. Presently, there is an offer to sell 1500 young iguanas at \$1.50, a price that covers the producer's costs and allows them to continue with the activity.

**Apiculture:** The following results have been achieved:

- \* The group is very interested in continuing with this activity, thus they have saved some money to increase the number of beehive; they also need a credit for C\$1300.00

- \* A proper assimilation of the technology for the management of the apicultural production is shown by the target group.
- \* High initial costs for the purchase of beehives. With project technical assistance, the beneficiaries are planning to build their own boxes and reproduce the beehives.
- \* Commercialization difficulties. Normally they sell their products to tourists or visitors. A more aggressive technique to commercialize the product outside of the community is necessary.

From now on, the beneficiaries, under the project technical support, will be responsible for this activity.

#### Economic analysis of the alternatives

As a supplement to the financial/economic analyses prepared last year on iguanas, shrimp production, apiculture and charcoal, other management models for shrimp production (cultivated) were reviewed.

Additionally, a report was prepared on shrimping practices in temporal lagoons.

#### Establishment of rotating funds

Workshops with the credit beneficiaries and Committee were carried out to update the status of accounts, review Fund rules and analyze the present situation in order to identify problems and propose solutions. As a result of these meetings, a plan was prepared to provide administrative and organizational training activities for the financial association.

During this quarter the status of credit accounts provided by IUCN Gender Project were updated. This fund was transferred to the Project for consolidation and to provide follow-up.

The \$22,500 fund is administered by three people (two from the community and one from the Project). Currently, \$12,000 is in the form of loans, the remaining \$10,500 are in a saving account. Of the credits given, \$2,500 has been repaid.

The possibility of transferring the credits to an intermediary financial entity was discussed. However, the institutions consulted do not fit the expectations stated by the Credit Committee; thus the possibility of forming a Community Financial Association to improve the implementation of the credits is being analyzed.

### Development and validation of improved production systems

In the group (Cooperative) "5 de Noviembre" the components that are still being validated within the predominant production systems include iguanas, apiculture and organic agriculture.

In the case of "28 de Julio" Cooperative, forest management is emphasized.

#### 2.1.5. Training

##### Presentation of results in different forums

Project results were presented at the Popular University of Nicaragua, Regional Center in Chinandega.

##### Presentation of results to making decision institutions

Project results were presented to Dr. Peter Stromgaard, Danida Program Coordinator in CATIE, CATIE representatives in Nicaragua and to the Directors of CATIE Research and Outreach Programs.

Presentations were made to CONAGRO Departmental and to the Directors and executives of MEDE, CIRH, MEPESCA, INETER and Protected Areas.

##### Organization of short courses and in-training service to technical staff

No significant progress was achieved in this activity.

##### Support to school teachers on environmental education

Project staff participated in twelve editions of the program "Chinandega Ambientalista" (Environmental Chinandega). This radio program is on the air on Sundays, in coordination with MAN-Chinandega.



### Dissemination of results and materials by national institutions

No significant achievements are reported in this activity.

## **2.2. CATIE HEADQUARTERS, TURRIALBA, COSTA RICA**

### General coordination

Greater efforts were dedicated to the preparation of the proposal for the continuation of project activities as well as to the unification of Olafo and Mangrove teams.

### Technical support from specialists

In Estero Real, technical staff from the headquarters provided technical assistance on forest management and harvesting activities, data analysis and processing, homegarden and agricultural activities, economical analysis, and organizational aspects. Support was also provided to programming and implementation of work plans for the land use planning strategy for Estero Real. Support from external consultants was required to achieve in this activity.

### Administrative support

As part of the administrative closing in Térraba-Sierpe, (working area that ended December 31, 1995) institutional support and follow-up was necessary to complete the transfer of the Project properties to the National System of Conservation Areas (SINAC). During this period the transfer of equipment such as vehicles was completed.

## **3. PROJECT FINANCIAL STATUS**

Table 1 presents Project account status as of June 1996. Annexes 1,2,3 and 4 present an itemized financial report for the Headquarters in Turrialba, Térraba-Sierpe, Estero Real and for the project as a whole, respectively.

Total budget execution by the end of the second phase of the original Project was 71.81%. During the second year, budget execution reached 65.74%

The Project was under-executed (as a whole) for phase II (July 1994-June 1996) due to a delay in the planned activities and because the Térraba-Sierpe Area finished a semester earlier than planned when project goals were met and closure recommended by the external evaluators.

CUADRO 1.

FINANCIAL STATEMENT (01 JULY 94- 30 JUNE 96)

SUB-PROJECT DANIDA/MANGLARES	TOTAL BUDGET AND EXPENDITURES		ANNUAL BUDGET AND ACCUMULATED EXPENDITURES 01 JULY - 30 JUNE 96					
	BUDGET 1994-1996	TOTAL EXPENDITURES 30 JUNE 1996	TOTAL EXPENDITURES 01 JULY 95 31 DECEMBER 95	EXPENDITURES 01 JANUARY 96 30 JUNE 96	TOTAL EXPENDITURES 30 JUNE 96	BALANCE	EXP % 01 JULY 95 30 JUNE 96	
HEADQUARTERS	268,500	167,941	65,097	30,325	95,422	37,578	71.7%	
TERRABA SIERPE	363,000	253,381	92,207	0	92,207	83,293	52.5%	
ESTERO REAL	449,500	354,953	84,328	80,682	165,010	43,990	79.0%	
SUB-TOTAL	1,081,000	776,275	241,632	111,007	352,639	164,861	68.1%	
Overhead	194,580	139,729	43,494	19,981	63,475	29,675	68.1%	
TOTAL	1,275,580	916,004	285,126	130,988	416,114	194,536	68.1%	

The Project financial statement is attached as annex 5 (Second phase) certified by CATIE comptroller office.

## **ANNEXES**

## ANEXO 1.

FINANCIAL STATEMENT (01 JULY 95- 30 JUNE 96)  
PROJECT DANIDA/MANGROVE  
PROJECT HEADQUARTERS

BUDGET ITEMS	EXPENDITURES		EXPENDITURES		TOTAL	
	BUDGET 2 <sup>o</sup> YEAR	01 JULY 95 31 DECEMBER 95	01 JANUARY 96 30 JUNE 96	COMMITTED 30 JUNE 96	EXPENDITURES 30 JUNE 96	BALANCE
<b>PERSONNEL</b>						
- Permanent	70,000	35,759	15,820	11,000	62,579	7,421
- Consultants	12,000	9,900			9,900	2,100
- Temporal					0	0
<b>EQUIPMENT</b>						
- Office Equipment					0	0
- Vehicles, boats & motors					0	0
- Small field equipment					0	0
<b>OPERATING EXPENSES</b>						
- International Travel					0	0
- Regional Travel	12,000	9,085	1,679		10,763	1,237
- National Travel	2,000	541			541	1,459
- Stationery	4,000	985	282	96	1,363	2,637
- Project Publications	10,000	893			893	9,107
- Communications	2,000	769	102		870	1,130
- Acquisition of publications	1,000				0	1,000
- Maintenance of Office Equipment	2,000	480			480	1,520
- Maintenance of Vehicles		34	976		1,010	(1,010)
- Fuel and Oil	1,000	53	37		90	910
- Office rental						
- Communities Investments						
- International Workshops	6,000	5,843			5,843	157
- Training Short Courses	8,000				0	8,000
- In-service Training						
- Project Staff Training	3,000	756	334		1,090	1,910
- Local Training						
- Support to Involved Institutions						
<b>SUB-TOTAL</b>	<b>133,000</b>	<b>65,097</b>	<b>19,228</b>	<b>11,096</b>	<b>95,422</b>	<b>37,578</b>
<b>Overhead</b>	<b>23,940</b>	<b>11,718</b>	<b>3,461</b>	<b>1,997</b>	<b>17,176</b>	<b>6,764</b>
<b>TOTAL</b>	<b>156,940</b>	<b>76,815</b>	<b>22,690</b>	<b>13,093</b>	<b>112,598</b>	<b>44,342</b>

FINANCIAL STATEMENT (01 JULY 95- 31 DECEMBER 95)  
PROJECT DANIDA/MANGROVE  
PROJECT TERRABA SIERPE

BUDGET ITEMS	BUDGET 2 <sup>o</sup> YEAR	EXPENDITURES		TOTAL		BALANCE
		01 JULY 95 30 SEPTEMBER 95	01 OCTOBER 95 31 DECEMBER 95	EXPENDITURES	EXPENDITURES	
<b>PERSONNEL</b>						
- Permanent	74,000	18,550	19,858	38,408	35,592	
- Consultants	27,500	9,258	3,694	12,952	14,548	
- Temporal	2,000	507	952	1,459	541	
<b>EQUIPMENT</b>						
- Office Equipment				0	0	
- Vehicles, boats & motors		1,453	0	1,453	(1,453)	
- Small field equipment				0	0	
<b>OPERATING EXPENSES</b>						
- International Travel					0	
- Regional Travel	4,000	1,747	1,317	3,065	935	
- National Travel	7,000	2,317	2,810	5,127	1,873	
- Stationery	3,000	800	1,333	2,133	867	
- Project Publications	6,000	746	846	1,592	4,408	
- Communications	3,500	594	176	770	2,730	
- Acquisition of Publications	500	0	0	0	500	
- Maintenance of Office Equipment	1,000	177	(164)	14	986	
- Maintenance of Vehicles	4,000	1,909	4,133	6,042	(2,042)	
- Fuel and Oil	6,000	1,394	308	1,702	4,298	
- Office rental	4,000	526	1,118	1,644	2,356	
- Communities Investments	3,000		23	23	2,977	
- International Workshops	3,000	0	8,360	8,360	(5,360)	
- Training Short Courses	8,000	6,931	0	6,931	1,069	
- In-service Training	6,000	2,399	(2,399)	(0)	6,000	
- Project Staff Training	4,000	196	0	196	3,804	
- Local Training	6,000	83	211	294	5,706	
- Support to Involved Institutions	3,000	0	43	43	2,957	
<b>SUB-TOTAL</b>	<b>175,500</b>	<b>49,589</b>	<b>42,618</b>	<b>92,207</b>	<b>83,293</b>	
<b>Overhead</b>	<b>31,590</b>	<b>8,926</b>	<b>7,671</b>	<b>16,597</b>	<b>14,993</b>	
<b>TOTAL</b>	<b>207,090</b>	<b>58,515</b>	<b>50,290</b>	<b>108,804</b>	<b>98,286</b>	

FINANCIAL STATEMENT (01 JULY 95- 30 JUNE 96)  
PROJECT DANIDA/MANGROVE  
PROJECT ESTERO REAL

BUDGET ITEMS	BUDGET 2 <sup>o</sup> YEAR	EXPENDITURES	EXPENDITURES	COMMITTED 30 JUNE 96	TOTAL	BALANCE
		01 JULY 95 31 DECEMBER 95	01 JANUARY 96 30 JUNE 96		EXPENDITURES 30 JUNE 96	
<b>PERSONNEL</b>						
- Permanent	93,000	40,027	25,383	17,746	83,156	9,844
- Consultants	18,000	12,975	3,971	1,950	18,896	(896)
- Temporal	2,500	(3,415)	1,075	48	(2,292)	4,792
<b>EQUIPMENT</b>						
- Office Equipment		1,062	30	21	1,113	(1,113)
- Vehicles, boats & motors					0	0
- Small field equipment					0	0
<b>OPERATING EXPENSES</b>						
- International Travel						
- Regional Travel	9,000	5,113	660	724	6,497	2,503
- National Travel	8,000	3,719	2,856	591	7,166	834
- Stationery	4,000	1,818	1,584		3,402	500
- Project Publications	6,000	181	395	13	589	5,411
- Communications	3,000	235	1		236	2,764
- Acquisition of publication	500	77	0	532	609	(109)
- Maps, aerial Photographs			5,216		5,216	(5,216)
- Maintenance of Office Equipment	1,000	115	584	342	1,041	(41)
- Maintenance of Vehicles	4,000	3,251	5,032	520	8,803	(4,803)
- Fuel and Oil	6,000	1,309	1,701	11	3,021	2,979
- Office rental	2,000	179	323	54	556	1,444
- Communities Investments	15,000	2,666	3,782		6,448	8,552
- International Workshops	3,000	6,242	543		6,785	(3,785)
- Training Short Courses	8,000	556	0	438	994	7,006
- In-service Training	6,000	500	0	191	691	5,309
- Project Staff Training	6,000	1,562	189		1,751	4,249
- Local Training	6,000	2,725	1,774		4,499	1,501
- Support to Involved Institut.	8,000	3,432	1,850	553	5,834	2,166
<b>SUB-TOTAL</b>	<b>209,000</b>	<b>84,329</b>	<b>56,948</b>	<b>23,734</b>	<b>165,011</b>	<b>43,980</b>
<b>Overhead</b>	<b>37,620</b>	<b>15,179</b>	<b>10,251</b>	<b>4,272</b>	<b>29,702</b>	<b>7,910</b>
<b>TOTAL</b>	<b>246,620</b>	<b>99,508</b>	<b>67,199</b>	<b>28,006</b>	<b>194,713</b>	<b>51,900</b>

**FINANCIAL STATEMENT (01 JULY 95- 30 JUNE 96)**  
**PROJECT DANIDA/MANGROVE**

BUDGET ITEMS	BUDGET 2 <sup>o</sup> YEAR	EXPENDITURES	EXPENDITURES	COMMITTED 30 JUNE 96	TOTAL	BALANCE
		01 JULY 95 31 DECEMBER 95	01 JANUARY 96 30 JUNE 96		EXPENDITURES 30 JUNE 96	
<b>PERSONNEL</b>						
- Permanent	237,000	114,194	41,203	28,746	184,143	52,857
- Consultants	57,500	35,827	3,971	1,950	41,748	15,752
- Temporal	4,500	(1,956)	1,075	48	(833)	5,333
<b>Sub-total</b>	<b>299,000</b>	<b>148,065</b>	<b>46,249</b>	<b>30,744</b>	<b>225,058</b>	<b>73,942</b>
<b>EQUIPMENT</b>						
- Office Equipment		1,062	30	21	1,113	(1,113)
- Vehicles, boats & motors		1,453			1,453	(1,453)
- Small field equipment					0	0
	0	2,515	30	21	2,566	(2,566)
<b>OPERATING EXPENSES</b>						
- International Travel						
- Regional Travel	25,000	17,263	2,339	724	20,326	4,674
- National Travel	17,000	9,387	2,856	591	12,834	4,166
- Stationery	11,000	4,936	1,862	96	6,894	4,106
- Project Publications	22,000	2,666	395	13	3,074	18,926
- Communications	8,500	1,774	103		1,877	6,623
- Acquisition of publication	2,000	77	0	532	609	1,391
- Maps, aerial Photographs			5,216		5,216	(5,216)
- Maintenance of Office Equipment	4,000	609	584	342	1,535	2,465
- Maintenance of Vehicles	8,000	9,327	6,008	520	15,855	(7,855)
- Fuel and Oil	13,000	3,064	1,738	11	4,813	8,187
- Office rental	6,000	1,823	323	54	2,200	3,800
	116,500	50,926	21,424	2,883	75,233	41,267
- Communities Investments	18,000	2,689	3,782		6,471	11,529
- International Workshops	12,000	20,445	543		20,988	(8,988)
- Training Short Courses	24,000	7,487	0	438	7,925	16,075
- In-service Training	12,000	500	0	191	691	11,309
- Project Staff Training	13,000	2,514	523		3,037	9,963
- Local Training	12,000	3,019	1,774		4,793	7,207
	73,000	33,965	2,840	629	37,434	35,566
- Support to Involved Institut.	11,000	3,475	1,850	553	5,878	5,122
<b>SUB-TOTAL</b>	<b>517,500</b>	<b>241,635</b>	<b>76,174</b>	<b>34,830</b>	<b>352,639</b>	<b>164,861</b>
<b>Overhead</b>	<b>93,150</b>	<b>43,494</b>	<b>13,711</b>	<b>6,269</b>	<b>63,475</b>	<b>29,675</b>
<b>TOTAL</b>	<b>610,650</b>	<b>285,129</b>	<b>89,885</b>	<b>41,099</b>	<b>416,114</b>	<b>194,536</b>



Account Code

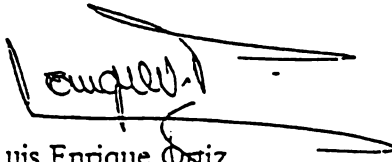
4530

FINANCIAL POSITION

	<u>U.S DOLLARS</u>
Payment Received	1,103,450
Less: Recorded Expenses	(916,003)
	-----
Balance	187,447
	=====

I hereby certify that the information contained herein is true and correct to the best of my knowledge



  
Luis Enrique Ortiz  
Comptroller

  
Tania Ammour  
Leader of Project