

# A.I.D. EVALUATION SUMMARY PART I

(BEFORE FILLING OUT THIS FORM, READ THE ATTACHED INSTRUCTIONS)

PD-AB7 448

IDENTIFICATION DATA

<b>A. REPORTING A.I.D. UNIT:</b> <u>USAID/G-CAP</u> (Mission or AID/W Office)  (ES# _____ )	<b>B. WAS EVALUATION SCHEDULED IN CURRENT FY ANNUAL EVALUATION PLAN?</b> yes <input type="checkbox"/> slipped <input type="checkbox"/> ad hoc <input type="checkbox"/>  Eval. Plan Submission Date: FY ___ Q ___	<b>C. EVALUATION TIMING</b> Interim <input type="checkbox"/> final <input type="checkbox"/> ex post <input type="checkbox"/> other <input type="checkbox"/>			
<b>D. ACTIVITY OR ACTIVITIES EVALUATED</b> (List the following information for project(s) or program(s) evaluated; If not applicable, list title and date of the evaluation report)					
Project #	Project/Program Title (or title & date of evaluation report)	First PROAG or equivalent (FY)	Most recent PACD (mo/yr)	Planned LOP Cost ('000)	Amount Obligated to Date ('000)
596-0129A	Regional Agricultural Higher Education	85	12/93	\$8,300	\$8,247

ACTIONS

<b>E. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR</b> <p style="text-align: center;">Action(s) Required</p> <p>There are no outstanding actions required to be taken by CATIE or USAID.</p> <p>A draft ES was prepared for this evaluation in June 1993 at the time the Guatemala bilateral and ROCAP regional programs were being merged. This ES facesheet has been prepared to notify that the evaluation had been completed and to record the Mission's approval of the previously prepared evaluation summary and the actions taken by CATIE to improve management and resource accountability; continue staff development and increase networking; and agree on Trust Fund uses; all of which were actions recommended by the evaluators.</p>	<b>Name of officer responsible for Action</b>	<b>Date Action to be Completed</b>
(Attach extra sheet if necessary)		

APPROVALS

<b>F. DATE OF MISSION OR AID/W OFFICE REVIEW OF EVALUATION:</b> mo <u>1</u> day <u>23</u> yr <u>93</u>				
<b>G. APPROVALS OF EVALUATION SUMMARY AND ACTION DECISIONS:</b>				
	Project/Program Officer	Representative of Borrower/Grantee	Evaluation Officer	Deputy Director
Signature	<i>Raymond W. Waldron</i>	<i>M. Kromhout</i>	<i>Hilda Arellano</i>	
Typed Name	Raymond Waldron	Margaret Kromhout	Hilda Arellano	
	Date: <u>5/5/94</u>	Date: _____	Date: <u>5/4/94</u>	Date: <u>5/27/94</u>

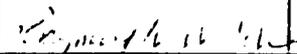
**APPENDIX D  
A.I.D. EVALUATION SUMMARY - PART I**

1. BEFORE FILLING OUT THIS FORM, READ THE ATTACHED INSTRUCTIONS.  
2. USE LETTER QUALITY TYPE, NOT "DOT MATRIX" TYPE.

IDENTIFICATION DATA					
A. Reporting A.I.D. Unit: Mission or AID/W Office <u>ROCAP</u> (ES# _____)		B. Was Evaluation Scheduled In Current FY Annual Evaluation Plan? Yes <input checked="" type="checkbox"/> Skipped <input type="checkbox"/> Ad Hoc <input type="checkbox"/> Evaluation Plan Submission Date: FY _____ Q _____		C. Evaluation Timing Interim <input type="checkbox"/> Final <input checked="" type="checkbox"/> Ex Post <input type="checkbox"/> Other <input type="checkbox"/>	
D. Activity or Activities Evaluated (List the following information for project(s) or program(s) evaluated; if not applicable, list title and date of the evaluation report.)					
Project No.	Project /Program Title	First PROAG or Equivalent (FY)	Most Recent PACD (Mo/Yr)	Planned LOP Cost (000)	Amount Obligated to Date (000)
596-0129A	Regional Agricultural Higher Education (RAHE)	85	12-93	\$8,300	\$8,247

ACTIONS		
E. Action Decisions Approved By Mission or AID/W Office Director	Name of Officer Responsible for Action	Date Action to be Completed
<p align="center"><b>Action(s) Required</b></p> <p>The Mission reviewed the Evaluation, January 29, 1993. An A.I.D. Evaluation Summary was prepared in June 1993. The Action Decisions Approved section stated "While definitive Agreement on specific actions and timing thereof has not been reached, we both intend to resolve these questions before the September, 1993 SAR and complete the actions agreed upon by the December, 1993 PACD."</p> <p>Since the Evaluation CATIE has continued to make substantive improvements in Management and Resource Allocation, Staff Development, Human Resources Development, Networking, and Trust Fund Compliance. CATIE has provided evidence of this in writing to ROCAP. Examples include:</p> <p><u>Management and Resources</u> - The Director General has continued to stream line upper management, revised remaining staffs' responsibilities to take greater advantage of skills, and reduced unnecessary and redundant staff. CATIE adopted the USAID recommended method for calculating overhead rates and with the assistance of an outside consulting firm has calculated a new overhead rate. CATIE also has improved its system for accounting for cash and inkind contributions to ROCAP funded activities.</p> <p><u>Staff Development</u> - With the financial savings from staff reductions CATIE was able to revise its salary scale to take in to account job responsibilities, skills, and seniority. CATIE also prepared a new personnel manual.</p>		
(Attach extra sheet if necessary)		

APPROVALS			
F. Date Of Mission Or AID/W Office Review Of Evaluation:			
	(Month)	(Day)	(Year)

G. Approvals of Evaluation Summary And Action Decisions:				
	Project/Program Officer	Representative of Borrower/Grantee	Evaluation Officer	Mission or AID/W Office Director
Name (Typed)	Raymond Waldron	Ramón Lastra	Margaret Kromhout	Hilda Arellano
Signature				
Date	1. 21. 94			

E. Action Decisions Approved By Mission on AID/W Office  
director (continuation)

Networking - No significant actions were required. In August CATIE hosted the annual meeting of REDCA.

Trust Fund Compliance - No compliance action required. In its continuing effort to create a sustainable financial base CATIE helped establish a foundation - FUNDATROPICOS. The foundation has as its principle function to attract and manage endowments with revenues being generated to support CATIE. The first resources made available to FUNDATROPICOS in the amount of \$6.2 million (in Colones) were provided under a transfer of trusteeship from USAID this year.

Based on ROCAP's agreement with CATIE on corrective actions taken and planned for calendar year 1993, some of which are detailed in CATIE's letter, D-1648, October 1, 1993, ROCAP approved CATIE's use of the remaining balance of the RAHE project funds, approximately \$19,600, in PIL No. 83.

IDENTIFICATION DATA

<b>A. Reporting A.I.D. Unit:</b> Mission or AID/W Office: <u>ROCAP</u> (ESF: _____)		<b>B. Was Evaluation Scheduled in Current FY Annual Evaluation Plan?</b> Yes <input checked="" type="checkbox"/> Stopped <input type="checkbox"/> Ad Hoc <input type="checkbox"/> Evaluation Plan Submission Date: FY _____		<b>C. Evaluation Timing</b> Interim <input type="checkbox"/> Final <input checked="" type="checkbox"/> Ex Post <input type="checkbox"/> Other <input type="checkbox"/>	
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**D. Activity or Activities Evaluated** (List the following information for project(s) or program(s) evaluated. If not applicable, list title and date of the evaluation report.)

Project No	Project / Program Title	First PROAG or Equivalent (FY)	Most Recent PACO (Mo/Yr)	Planned LOP Cost (000)	Amount Obligated to Date (000)
596-0129A	Regional Agricultural Higher Education (RAHE)	85	12-93	\$8,300	\$8,247

ACTIONS

<b>E. Action Decisions Approved By Mission or AID/W Office Director</b> <p style="text-align: center;"><b>Action(s) Required</b></p> <p>The Evaluation notes a series of failings and opportunities for improvement in CATIE, and in its Executive Summary and Lessons Learned suggests with varying degrees of specificity remedial actions to be considered. Since the Evaluation was received, CATIE and ROCAP have been in an often interrupted consultation on the validity of these findings and recommendations, and on May 31 CATIE delivered a nine-page summary of clarifications and comments for ROCAP consideration. While definitive agreement on specific actions and timing thereof has not been reached, we both intend to resolve these questions before the September, 1993 SAR, and complete the actions agreed upon by the December, 1993 PACD.</p>		Name of Officer Responsible for Action	Date Action to be Completed

(Attach extra if necessary)

APPROVALS

<b>F. Date Of Mission Or AID/W Office Review Of Evaluation:</b>				(Month)	(Day)	(Year)
				1	29	93
<b>G. Approvals of Evaluation Summary And Action Decisions:</b>						
	Project/Program Officer	Representative of Borrower/Grantee	Evaluation Officer	Mission or AID/W Office Director		
Name (Typed)	Raymond Waldron	Ramón Lastra	Nancy Hooff	Terry Brown		
Signature	<i>Raymond W. Waldron</i>					
Date	25 JUL 93					

**ABSTRACT**

**M Evaluation Abstract (Completed Project #1-500)**

This nine-year (1985-93) \$16.4 million (\$8.3 in AID Dollars, \$8.1 in Trust Fund Colones) Project with CATIE, Central America's Tropical Agriculture Research and Training Center, was designed to produce a cadre of professionals to address the agricultural production problems of Central America.

The objectives of this Evaluation were: to review the use of funds and assess CATIE's performance in developing its graduate studies and non-degree programs; to review CATIE's compliance with the conditions under which it would continue to receive Colones generated by the Trust Fund; and to identify lessons with implications for CATIE in sustainable agriculture and natural resources management in the region. The Evaluation covers the entire Project, and is based on document reviews and interviews with CATIE staff, alumni, and collaborating institutions in Costa Rica, El Salvador, and Guatemala. The Project met its targets in construction; met or exceeded its targets in curricula and faculty improvement; fell short in creating a sustainable funding base; and CATIE met the Trust Fund continuance conditions. Lessons: research fundings should include teaching responsibilities; networking opportunities draw professionals, and complement compensation packages; a small remote Center needs a stream of new personnel with new ideas; and plant maintenance, traditionally neglected, is critical to attracting the funding and personnel the other lessons look towards.

BEST AVAILABLE DOCUMENT

**COSTS**

**I. Evaluation Costs**

**1. Evaluation Team**

Name	Affiliation	Contract Number OR TDY Person Days	Contract Cost OR TDY Cost (U.S. \$)	Source of Funds
Delbert Myren, Team Leader	Chemonics	IQC-RDC-5517-	\$88,000	PIO/Ts 596-
Jairo Cano	International	1-00-0103-00;		0129-3-70086
James Chapman		140 days		and - 10097
Miguel Angel Garcia				
Leonardo Garrido				

**2. Mission/Office Professional Staff**

Person-Days (Estimate) 10

**3. Borrower/Grantee Professional**

Staff Person-Days (Estimate) 20

5

# A.I.D. EVALUATION SUMMARY - PART II

## SUMMARY

J. Summary of Evaluation Findings, Conclusions and Recommendations (Try not to exceed the three (3) pages provided)

Address the following items:

- Purpose of evaluation and methodology used
- Purpose of activity(ies) evaluated
- Findings and conclusions (relate to questions)
- Principal recommendations
- Lessons learned

Mission or Office:

ROCAP

Date This Summary Prepared:

25 JUN 93

Title And Date Of Full Evaluation Report:

Regional Agricultural Higher Education Project; CATIE Component-Final Evaluation Report, December, 1992.

### 1. Problem and Project

Agriculture is the economic backbone of Central America. However there are doubts about the region's ability to meet future demand for food, industrial, and export crops given current practices, the deterioration of land and water resources, and ignorance of opportunities in new crops and enterprises in different areas. New technology is critical. What is missing is the human resource base able to generate/adapt, disseminate, and apply this new technology.

The Project's purpose was to produce a cadre of professionals with the educational and experience to address the agricultural production problems of the region. An increase in trained agriculturalists, along with sound policies and sufficient investment in research, will increase the generation, adaptation and application of cost-effective agricultural technologies. The four Activities to be financed were: CATIE staff development; facilities and equipment; curriculum and administrative development; and networking. The Project contributes to the strategic objective of environmentally sound and efficient practices in resource management: CATIE's "sustainable production" curriculum takes into account long term environmental as well as economic efficiency factors.

### 2. The Evaluation

The objective of this Evaluation was to review the use of funds and assess the performance of CATIE in developing its graduate studies and non-degree programs. The Evaluation was to address activities financed directly by U.S. dollars, such as staff and administrative development, curriculum, networking, equipment, and endowment planning, as well as construction and technical assistance funded by the local currency component. The Evaluators were also to review CATIE's compliance with the conditions under which CATIE would continue to receive income generated by the Trust Fund. The final objective was the identification of lessons that may have long-term implications for CATIE in supporting sustainable agriculture and natural resources management in the region. The Evaluation was carried out in October-November 1992 by a team of

BEST AVAILABLE DOCUMENT

five specialists contracted by ROCAP, with document reviews and interviews with CATIE staff, alumni, and collaborating institutions in Costa Rica, El Salvador, and Guatemala.

### **3. Findings**

#### **a. Overall Project Management and Resource Allocation**

##### **(i) Management**

CATIE's management structure was strengthened. The functions of the Board of Directors were divided, giving stronger support to the postgraduate program. CATIE's Director General took steps to improve accountability and financial viability. However CATIE's management remains top-heavy, and should shift responsibility to operating levels. Steps were taken to improve planning and budgeting. Management seeks to establish two levels: a strategic plan adapted to the region's economic and political situation, and a two-year action plan revised annually to link short-term budgeting and strategic planning. The data needed is becoming available through an integrated financial information system. In practice, however, there are still problems integrating planning and budgeting for CATIE as a whole.

##### **(ii) Finances**

CATIE's accounting system produces timely and accurate financial reports. However, accounting at CATIE follows guidelines from the Board and not generally accepted accounting principles. This is not adequate for sound management, and should be corrected. The internal auditor is not fully trained in AID procedures and regulations. CATIE should use its budget more effectively as a management tool. Control is needed to avoid authorizing disbursements when there are no funds available.

The present tuition of \$5,000 per student per year is insufficient. To cover costs only, tuition would have to be \$6,267. A more active relationship with the country members of CATIE might reduce delays in quota payments. A Development Office was set up. After one year it was discontinued because it focused on donations, in violation of the original purpose of not asking for charity. An Alumni Affairs Office was established, but the outcome was contrary to expectations. The intent was to involve former students in fundraising; instead, they turned to CATIE for financial support. As an exception, however, the alumni association in Costa Rica (AGIICAT) has 50 dues-paying members, is well

organized, conducts regular monthly meetings, and has dynamic leadership. Its accomplishments include a monthly newsletter and successful lobbying of the Costa Rican government. AGIICAT plans to establish a consulting firm and develop a Resumé database to help members find assignments. Overall, however, CATIE's development work did not produce an effective marketing strategy directed at governments, foundations, international organizations, or alumni. Although CATIE's income and expense forecasts do not predict major difficulties financing the Center's cash flow, CATIE must secure new donors and other sources of funds.

**b. Staff Development**

Faculty expansion was accomplished as stated in the Project Paper. The additional teachers provided stability and continuity during the Project years. Forty two of CATIE's 52 principal technical staff, 11 of the 29 associate staff, and 15 of the 99 support staff are involved in educational activities: 38 percent of all technical staff. Some research projects have taken on additional teaching responsibilities to help fill the gap in core funding, enhancing linkages between postgraduate instruction and research. However the still small number of positions funded by the core budget left the teaching program heavily dependent on research project funding. Retention of staff was not a problem because of careful recruiting and long-term funding. Nevertheless the overall turnover rate for faculty is high.

**c. Human Resources Development**

The Project helped create a systematic curriculum development process. Courses have well defined analytic content, through there is still room to reduce ambiguity. Staff is hired with clearly defined responsibilities for education and research, and the research and education components of CATIE interact well. Graduate topics are based on research program areas, and most faculty are involved in both research and teaching. The graduate program reached a peak in 1989 of 58 students, and from 1986-1992, 314 students received M.Sc. degrees - 57 percent above the stated target. Moreover, training doubled during Project implementation, reaching 6,335 professionals (81 percent above target). Currently 45 percent of the training is done at CATIE and the rest is carried out in country. The participation of students from Central America and Panama increased. Today nearly 70 percent of students are from CATIE member countries, while other Latin American and Caribbean countries provide 25 percent. CATIE gives an entrance exam that accounts for percent of the entrance score. Beginning in 1993, the Center plans to gradually increase the weight of the examination from 40 to 80 percent, to increase the objectivity of the selection process as well

as the quality of incoming students.

**d. Networking**

CATIE's principal networking action was the founding and support of the Regional Network. REDCA's national activities provided an opportunity for local institutions to share information, collaborate on course development, and implement cooperative projects. CATIE significantly increased its outreach in member countries via the REDCA committees.

**e. Trust Fund Compliance**

The five tests specified in MOU 21 as levels of progress to be achieved by CATIE to continue local currency funding were met:

-The majority of the technical staff of CATIE are involved in educational activities-teaching postgraduate courses, training personnel, or acting as thesis advisors;

-The projected number of additional graduates per year was achieved-exactly 30 if we compare the year that the project was approved, 1985, with the average of the last four years, 1989-1992. In other words, 51 graduates per year, compared to 21 in 1985;

-All planned construction was completed satisfactorily, including all items specified in the agreement signed by AID/ROCAP and CATIE;

-The student body is predominantly from Central America and Panama, but includes students from other CATIE member countries such as the Dominican Republic; and

-CATIE's long-range planning includes ample coordination and consistency with the human resources needs of its member countries as identified by their respective governments. The curriculum development plan includes consultation with the countries and member institutions of REDCA so that the Center's studies fit the needs of the region.

**4. Lessons Learned (SIC)**

**Management and Resource Allocation**

The staff positions funded under this project were assigned to research departments, though they maintained specific teaching and thesis supervision responsibilities. This approach helped gain fuller participation of the research departments. Many research contracts are

now negotiated with teaching responsibilities included in the job descriptions.

### **Staff Development**

Sufficient monetary compensation is basic to attracting top personnel. However, many professionals are drawn by other incentives such as opportunities for professional growth through cooperative work and exchange of ideas with other specialists in their fields.

### **Curriculum, Development, and Alumni Affairs**

Concerted efforts are needed from all of CATIE's personnel, associates, and friends to strengthen marketing and skills and reinforce the Center's identity and pertinence.

The curriculum needs continued upgrading. In the past, CATIE prepared its students for a future of research, teaching, or Ph. D. pursuit. Now societies in the region are asking for professionals to strengthen government institutions and private enterprises.

### **Local Currency Trust Funds**

Without the local currency component, CATIE would have been severely handicapped in its efforts to double the number of graduate students and improve the quality of education. While the dollar funding was basic for expanding the staff dedicated principally to teaching, the local currency provided needed buildings and equipment.

**BEST AVAILABLE DOCUMENT**

**ATTACHMENTS**

**K. Attachments** (List attachments submitted with this Evaluation Summary: always attach copy of full evaluation report, even if one was submitted earlier; attach studies, surveys, etc. from "on-going" evaluation, if relevant to the evaluation report.)

Evaluation Report; CATIE letter of May 31, 1993.

**COMMENTS**

**L. Comments By Mission, AID/W Office and Borrower/Grantee On Full Report**

This Evaluation Report conforms to the Scope of Work required of the Contractor, and presents a fair and accurate report on CATIE's implementation, and the contribution of ROCAP and USAID/Costa Rica resources to agreed upon human resources development.

CONFIRMACION DE ENVIO

NUM. : 013  
RECEPTOR :  
TRANSMISOR : 502 2 320523  
FECHA : CATIE POSTGRADO  
DURACION : OCT 15 '93 18:38  
MODO : ESTAND.  
PAGS. : 04  
ESTADO : OK

Lucia —  
FILE



## CENTRO AGRONOMICO TROPICAL DE INVESTIGACION Y ENSEÑANZA

Turrialba · Costa Rica · Teléfonos: 56-64-31 · 56-01-69 · Telex: 8005 CATIE C.R. · Fax 56-1533 · Cable: CATIE Turrialba

15 de octubre, 1993  
D-1648

Señor  
Raymond Waldron  
Director ONARM  
Guatemala

Estimado señor Waldron:

Dando seguimiento a la solicitud planteada en la carta de ejecución FY93-82 me permito presentarle el Plan de Trabajo y presupuesto sobre el uso del remanente del proyecto AID/ROCAP No.596-129A Higher Education, estimados en US\$19.671, y a la vez atender algunas de las recomendaciones presentadas en el informe de evaluación externa del mencionado proyecto.

Con este fin y para fortalecer el proceso administrativo y estar en capacidad de controlar y determinar los costos de enseñanza en CATIE, solicitamos autorizar el uso de US\$10.000 para la contratación de una firma consultora que realice un estudio de los costos para el postgrado y capacitación en CATIE. (según Anexo A)

En vista de la necesidad de diseñar una metodología para controlar los precios de transferencias de los servicios internos y la importancia que esto significa para los donantes, deseamos incluir en este trabajo un estudio de los costos internos del CATIE, por ejemplo; procesamiento electrónico de datos, alquiler de vehículos, fotocopiado, etc. Con esto deseamos obtener un modelo que permita mantener la actualización de los costos que se transfieren a los proyectos.

Este estudio vendrá a definir claramente el costo de los servicios que brinda CATIE al programa de Postgrado, al programa de Capacitación y a los proyectos. El estudio dejará establecido un mecanismo permanente para la actualización de los costos.

R.M.



## CENTRO AGRONÓMICO TROPICAL DE INVESTIGACION Y ENSEÑANZA

Turrialba · Costa Rica · Teléfonos: 56-64-31 · 56-01-69 · Telex: 8005 CATIE C.R. · Fax 56-1533 · Cable: CATIE Turrialba

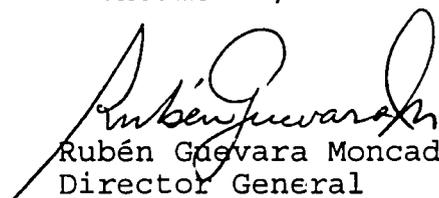
Presentamos esta solicitud atendiendo la recomendación de la evaluación externa, expresado en la página III-11, A3e, Other Financial Management and Viability Issues, "Postgraduate cost and pricing" y en la página III-9, A3b, página III-10. Postgraduate Program Financial Controls and Auditing, "Prices for training".

Adicionalmente solicitamos autorizar el uso de US\$9.671 (según anexo B) para revisar y publicar el catálogo de estudio de postgrado en español y editar una versión en inglés. El costo de la traducción estaría incluido en el monto solicitado. Con esto estamos facilitando toda la información necesaria para los posibles donantes y potenciales estudiantes de maestría de la región y apoyando de esta forma la proyección externa del CATIE.

Consideramos que esta petición se sustenta en la recomendación C3c(2) "Comments" de la página III-35 del informe de evaluación externa. Dada la importancia que significa para CATIE esta nueva edición solicitamos autorizar cualquier otro fondo adicional que resultare del cierre final del proyecto para aumentar el número de catálogos.

Agradeciendo su fina atención se suscribe con las muestras de mi especial estima y consideración.

Atentamente,

  
Rubén Guevara Moncada  
Director General

FC.: EHipsley, RLastra, LEOrtiz

A N E X O A

DESCRIPCION Y PRESUPUESTO ILUSTRATIVO  
CONSULTORIA DE COSTOS DE ESTUDIOS DE POSGRADO  
Y CAPACITACION Y ESTIMACION DE PRECIOS  
DE TRANSFERENCIA

=====	
	US \$
A. COSTOS DE POSTGRADO 1/	2.500
B. COSTOS DE CAPACITACION 1/	2.500
C. ESTIMACION DE PRECIOS /2 DE TRANSFERENCIA	5.000
=====	
TOTAL	10.000

1/ INCLUYE UN MES HOMBRE A US\$ 200/DIA (24 DIAS LABORABLES MAS COSTO DE IMPRESION DE INFORME)

2/ INCLUYE UN MES HOMBRE A US\$ 200/DIA (24 DIAS LABORABLES MAS COSTO DE IMPRESION DE INFORME)

R.G.

A N E X O B

DESCRIPCION Y PRESUPUESTO ILUSTRATIVO

REVISION Y PUBLICACION DE CATALOGO  
DE ESTUDIOS DE POSTGRADO

*R.G.*

VERSIONES EN ESPAÑOL E INGLES

=====	
	US \$
A. TRADUCCION Y EDICION EN INGLES	821
B. IMPRESION DE 2300 CATALOGOS EN ESPAÑOL	6.900
C. IMPRESION DE 650 CATALOGOS EN INGLES	1.950
=====	
TOTAL	9.671

DIRECCIÓN GENERAL

25 de octubre, 1993  
D-1694

Señor  
Raymond Waldron  
Gerente del Proyecto  
ONARM-Guatemala  
Guatemala

Estimado Raymond:

En relación a su amable solicitud según nota del 4 de octubre de 1993, me permito informarle sobre lo realizado por CATIE en el procedimiento de evaluación del personal:

1. La Unidad de Recursos Humanos ha venido trabajando en dos aspectos importantes: los manuales de clasificación y descripción de puestos de todo el personal y en el proceso de evaluación del desempeño del personal.
2. En su última Reunión Ordinaria (3 y 4 de agosto) el Comité Ejecutivo y de Finanzas de la Junta Directiva del CATIE conoció de estos procesos y la Junta Directiva mediante la Resolución 23-93/V ROJD de su reunión del 5 y 6 de octubre pasados aprobó lo actuado por la Administración y recomendó continuar con el proceso.
3. La Dirección General contrató la firma consultora Price Waterhouse para revisar los manuales y procedimientos elaborados por la Unidad de Recursos Humanos, consultoría que se encuentra en su etapa final.
4. El Comité Administrativo del CATIE, en su XXVII Reunión celebrada el 14 de setiembre de 1993, conoció y revisó el proceso de evaluación del personal y emitió la Resolución 27-2CA/93 que textualmente dice:

"A partir de 1994 se evaluará todo el personal técnico y de apoyo con base en los parámetros que se han fijado. En enero de 1994 se hará una evaluación de 1993, la cual servirá de base y prueba para la de 1994"

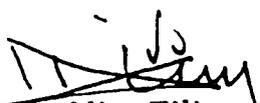
Sr. Raymond Waldron  
Página 2  
22 de octubre, 1993

5. Los formularios para la evaluación ya han sido revisados por la Dirección General y discutidos en el seno del Comité Administrativo y todo esta preparado para iniciar la actividad en enero de 1994. Con fecha 19 de octubre, 1993 se ha hecho circular a todo el personal el memorando D-1670, donde se informa sobre el proceso y las directrices que en este sentido se seguirán.

Como puede notar, el proceso de evaluación del personal ya está próximo a ponerse en funcionamiento. Adjunto le envío copias de los formularios preparados para las dos categorías de personal (técnico y de apoyo) y del manual de puestos y salarios.

Al esperar que esta información le sea de utilidad, me es grato reiterarle las muestras de mi mayor aprecio y consideración.

Atentamente,

  
Rómulo Olivo Filippe  
Director General Encargado

kfc

Adjunto: formularios y manual

fc: Rubén Guevara Moncada, Director General  
Eduardo Hipsley, AALO-ROCAP

UNITED STATES  
AGENCY FOR INTERNATIONAL DEVELOPMENT  
REGIONAL OFFICE FOR CENTRAL AMERICAN PROGRAMS  
GUATEMALA CITY, GUATEMALA, C.A.

NOV 08 1993

NOV 11 1993

Carta de Ejecución No. 83

Implementation Letter No. 83

Convenio de Donación No. 596-0129-G-00-5082-00 de fecha 19 de agosto de 1985.

Grant Agreement No. 596-0129-G-00-5082-00 dated August 19, 1985.

Proyecto No. 596-0129.

Project No. 596-0129.

Proyecto Regional Agrícola de Enseñanza y Capacitación de Post Grado.

Regional Agricultural Higher Education Project.

Doctor  
Rubén Guevara Moncada  
Director General  
CATIE  
Turrialba, Costa Rica

Doctor  
Rubén Guevara Moncada  
Director General  
CATIE  
Turrialba, Costa Rica

Estimado Doctor Guevara,

Dear Doctor Guevara,

Por medio de esta Carta de Ejecución me complace aprobar el plan de trabajo y presupuesto para la ejecución de varias recomendaciones de la evaluación final tal y como lo presenta en su carta No. D-1648. Los fondos para esta actividad fueron asignados y comprometidos con la Carta de Ejecución No. FY93-82.

With this Project Implementation Letter, I am pleased to approve the work plan and budget for the implementation of several of the final evaluation recommendations as presented in your letter No. D-1648. The funds for this activity were earmarked and committed with Project Implementation Letter No. FY93-82.

El plan de trabajo deberá haberse ejecutado totalmente no más tarde del 31 de diciembre de 1993. Le ruego tomar nota que no podrán hacerse desembolsos después del 31 de diciembre de 1993, Fecha de Terminación de la Asistencia al Proyecto.

The work plan should be fully implemented no later than December 31, 1993. Please note that no disbursements can be made after December 31, 1993, the Project Assistance Completion Date.

CATIE deberá presentar a la Misión A.I.D. un informe sobre los resultados del trabajo realizado a más tardar el 15 de enero de 1994.

CATIE should submit to the A.I.D. Mission a report on the results of the work done no later than January 15, 1994.

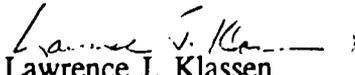
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Dr. Rubén Guevara Moncada  
Página 2

Les recordamos que la contratación de los servicios deberá realizarse de acuerdo con el Manual de Compras de CATIE y los lineamientos de compra local adjuntos.

Atentamente,

We remind you that the contracting of the services must be carried out in accordance with CATIE's Procurement Manual and the local procurement guidelines attached.

Sincerely,

  
Lawrence J. Klassen  
Director Regional en Funciones

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LOCAL PROCUREMENT

1. GENERAL

- a. Financing local procurement involves the use of the A.I.D. Mission funds to finance the procurement of goods and services supplied by local businesses, dealers or producers, with payment normally being in the currency of the cooperating country.
- b. All locally financed procurements must be covered by the A.I.D Mission approved source or nationality waivers, with the following exceptions:
  1. Locally available commodities of U.S. origin, which are otherwise eligible for financing, if the value of the transaction is estimated not to exceed the local currency equivalent of \$100,000 (exclusive of transportation costs).
  2. Commodities of geographic code 935 origin if the value of the transaction does not exceed \$5,000.
  3. Professional services contracts estimated not to exceed \$250,000.
  4. Construction services contracts estimated not to exceed \$5,000,000.
  5. The following commodities and services, which are available only locally:
    - a) Utilities including fuel for heating and cooking, waste disposal and trash collection;
    - b) communications - telephone, telex, fax, postal and courier services;
    - c) rental costs for housing and office space;
    - d) petroleum, oils and lubricants for operating vehicles and equipment;
    - e) newspapers, periodicals and books published in the cooperating country;
    - f) other commodities and services (and related expenses) that, by their nature or as a practical matter, can only be acquired, performed, or incurred in the cooperating country, e.g., vehicle maintenance, hotel accommodations, etc.
- c. Programming Determinations
  1. It is the A.I.D. Mission's policy not to finance customs duties associated with the local procurement of imported items, the extent practicable. When it has been determined that certain imported items can be procured locally under a project, it should also be determined what methods can be used to assure that the A.I.D. Mission does not finance identifiable customs duties, either by avoiding payment entirely or by being reimbursed for the amount attributable to customs duties. Two ways in which this might be

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accomplished are (a) to arrange for the local supplier to receive an exemption from the cooperating country government covering the supplier's next import of the same item and to sell the item in stock without including the duties, or (b) to required the cooperating country to contribute an appropriate amount of local currency to the project or in support of the A.I.D. Mission activities to offset the amount of customs duties. This policy does not apply to procurements by non-governmental organizations receiving assistance.

2. When local procurement of U.S. origin commodities is planned under a project, such a decision should be supported by an analysis of the prices of goods expected to be procured, and a determination that the prices are reasonable, taking into account comparable delivery terms and prices from the United States, and the implementation schedule of the project.

2. **PROCUREMENT PROCEDURES**

- a. When solicitations for technical or professional services are made solely within the cooperating country, the contract approval requirements as set forth in Section 2.2, the competitive principle in Sections 2.4.1, the nationality requirements in Section 2.6, and the appropriate mandatory contract clauses discussed in Section 2.12, of A.I.D. Handbook 11, Chapter 1, are applicable.
- b. When solicitations for construction services are made solely within the cooperating country, the contract approval requirements as set forth in Section 2.2, the nationality and source requirements in Section 2.5, the applicable mandatory contract clauses in Section 2.11, and the competitive principle in Section 2.3.1a, of A.I.D. Handbook 11, Chapter 2, are applicable.
- c. When solicitations for equipment or materials are made solely within the cooperating country, the contract approval requirements as set forth in Section 2.1, the contracting method in Section 2.2, eligibility of commodities in Section 2.5, source or commodities and commodity related services and nationality of suppliers in Section 2.6, and the applicable mandatory contract clauses in Section 2.13, of A.I.D. Handbook 11, Chapter 3, are applicable.
- d. While it is not necessary to publicize such procurements in the United States, all requirements should be publicized locally to the extent practicable.
- e. In those cases where a procurement is estimated to exceed \$250,000, or the equivalent in local currency, the A.I.D. Mission's policy on assessing and certifying the capability of the host country contracting agency to undertake the procurement is applicable.

3. **PRICE REQUIREMENT**

- a. The buyer shall pay no more than the lowest available price, including transportation. the term "reasonable price" as used in project agreements means the price which satisfies this test.
- b. The requirement that the buyer pay no more than the lowest available price will be satisfied if the buyer has followed sound procurement practice and accepts the most advantageous offer, price and other pertinent factors considered, such as quality of the goods and services, delivery time,

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transportation costs, payment terms, availability of spare parts, installation and repair services. When competitive offers are not available, as in the case of sole-source procurements, some form of cost or price analysis should be used to establish the reasonableness of price.

- c. For procurements through formal competitive bidding procedures, the lowest responsive bid normally will be accepted as meaning the lowest available price.

4. **PAYMENT METHODS**

The implementing documents should specify the applicable method of payment for locally procured commodities and services. The usual methods of making payment are direct reimbursement to the Grantee on the basis of documentation specified by the A.I.D. Mission, or direct payment by the A.I.D. Mission to the supplier on behalf of the Grantee. Other methods which are acceptable to the A.I.D. Mission and consistent with the A.I.D. Mission's policy on cash management also may be utilized.

5. **CERTIFICATION OF U.S. ORIGIN**

In those cases where U.S. origin commodities are procured locally, the supplier's invoice shall include a certification that the commodities are of U.S. origin and comply with the A.I.D. Mission componentry requirements.

6. **WAIVERS**

Any waivers of the policies set forth in paragraph 1b, above, which would relax restrictions on local procurement, may be authorized only on a case-by-case basis by the A.I.D. Mission.

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COMPRAS LOCALES

1. GENERAL

- a. El financiamiento de compras locales implica el uso de fondos de la Misión A.I.D. para financiar la compra de bienes y servicios proporcionados por empresas, comerciantes o productores, siendo el pago normalmente en moneda del país anfitrión.
- b. Toda compra financiada localmente debe ser respaldada por una dispensa del origen o nacionalidad, aprobada por la Misión A.I.D., con las siguientes excepciones:
  - 1. Productos de origen estadounidense, disponibles localmente y elegibles para financiamiento, si se estima que el valor de la transacción no excederá el equivalente a \$100,000 en moneda local (aparte de costos de transporte).
  - 2. Productos originados en el Código Geográfico 935, si el valor de la transacción no excede de \$5,000.
  - 3. Contratos de servicios profesionales que se estima no excederán de \$250,000.
  - 4. Contratos por servicios de construcción que se estime no excederán de \$5,000,000.
  - 5. Los siguientes productos y servicios que solo se consiguen localmente:
    - a) servicios incluyendo combustibles para calefacción y cocina, y recolección y eliminación de basura;
    - b) comunicaciones - teléfono, telex, fax, servicios postales y correo expreso;
    - c) costos de arrendamiento de vivienda y oficinas;
    - d) petróleo, aceites y lubricantes para la operación de vehículos y equipo;
    - e) periódicos, boletines y libros publicados en el país anfitrión;
    - f) otros productos y servicios (y gastos relacionados) que, por su naturaleza o por conveniencia, pueden únicamente ser adquiridos, realizados o incurridos en el país anfitrión; por ejemplo, mantenimiento de vehículo, alojamiento en hoteles, etc.
- c) Determinaciones de Programación
  - 1. Hasta donde sea posible, es política de la Misión A.I.D. no financiar el pago de derechos de aduana asociados con la compra local de productos importados. Cuando se ha determinado que ciertos productos importados pueden ser comprados localmente bajo algún proyecto, también deberá definirse que método puede usarse para asegurar que la Misión A.I.D. no pague por los derechos de aduana correspondientes, ya sea evitando completamente el pago o a través del reembolso de la cantidad imputable a los derechos

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de aduana. Dos maneras en que puede llevarse a cabo lo anterior son (a) hacer arreglos para que el proveedor local reciba del gobierno del país anfitrión una exoneración que cubra la siguiente importación del mismo artículo y vender dicho artículo sin incluir los derechos, o (b) solicitar al país anfitrión que contribuya con una cantidad adecuada en moneda local al proyecto, o en apoyo a las actividades de la Misión A.I.D. para compensar el monto de los derechos de aduana. Esta política no se aplica a compras de organizaciones no gubernamentales que reciben asistencia.

2. Cuando bajo un proyecto se planifica la compra local de algún artículo de origen estadounidense, dicha decisión deberá ser apoyada por un análisis de los precios de los artículos a adquirirse y una determinación de que los precios son razonables, tomando en cuenta precios comparables y condiciones de entrega desde los Estados Unidos, y el calendario de ejecución del proyecto.

## 2. PROCEDIMIENTOS PARA COMPRAS

- a. Cuando se requiera la contratación de servicios técnicos o profesionales exclusivamente dentro del país anfitrión, se aplicaran los requisitos establecidos en la Sección 2.2, el principio competitivo en la Sección 2.4.1, los requisitos de nacionalidad en la Sección 2.6, y las cláusulas obligatorias aplicables que se indican en la Sección 2.12 del Manual 11 de la A.I.D., Capítulo 1.
- b. Cuando se requieran servicios de construcción exclusivamente dentro del país anfitrión, se aplicaran los requisitos de aprobación indicados en la Sección 2.2, los requisitos de origen y nacionalidad en la Sección 2.5, las cláusulas obligatorias para contratos en la Sección 2.11 y el principio competitivo en la Sección 2.3. la del Manual 11 de la A.I.D., Capítulo 2.
- c. Cuando se requiera equipo y material exclusivamente dentro del país anfitrión, se aplicaran los requisitos de aprobación indicados en la Sección 2.1, el método de contratación en la Sección 2.2, elegibilidad de productos en la Sección 2.5, origen de los artículos y servicios relacionados a ellos, así como nacionalidad de los proveedores en la Sección 2.6, y las cláusulas obligatorias para contratos en la Sección 2.13 del Manual 11 de la A.I.D., Capítulo 3.
- d. Aunque no es necesario publicar las compras en los Estados Unidos, hasta donde sea posible deberían publicarse todos los requisitos localmente.
- e. En aquellos casos donde se estime que la compra sobrepasará los \$250,000, o su equivalente en moneda local, se aplicará la política de la Misión A.I.D. con respecto a evaluar y certificar la capacidad de la agencia contratante en el país anfitrión para llevar a cabo la adquisición.

## 3. REQUISITO DE PRECIOS

- a. El comprador no pagará más del precio menor disponible, incluyendo transporte. El término "precio razonable" tal como se usa en los convenios de proyectos se refiere al precio que satisfaga esta prueba.

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- b. El requisito de que el comprador no pague más de el menor precio disponible se cumplirá si los procedimientos de compra que ha seguido han sido sólidos y acepta la oferta y el precio más ventajoso así como si considera otros factores tales como la calidad de los bienes y servicio, tiempo de entrega, costos de transporte, condiciones de pago, disponibilidad de repuestos y servicios de instalación y reparación. cuando no se disponga de ofertas competitivas, como en el caso de adquisiciones de una sola fuente, deberá usarse algún análisis de costo o precio para establecer si el precio es adecuado.
- c. Para compras efectuadas a través de procedimientos formales de licitación competitiva, generalmente se aceptará la licitación más baja, en el entendido que se trata del menor precio disponible.

4. **METODO DE PAGO**

Los documentos de ejecución deberán especificar el método de pago apropiado para productos y servicios adquiridos localmente. Generalmente el método de pago se hace a través de reembolso directo al Donatario en base a la documentación especificada por la Misión A.I.D., o a través de pago directo por parte de la Misión A.I.D. al proveedor en nombre del Donatario. También podrán utilizarse otros métodos aceptables a la Misión A.I.D. que sean consistentes con la política de la Misión A.I.D. con respecto al manejo de fondos.

5. **CERTIFICACIÓN SOBRE ORIGEN ESTADOUNIDENSE**

En aquellos casos en que se adquieran localmente productos de origen estadounidense, la factura del proveedor deberá incluir una certificación de que los artículos son de origen norteamericano y que cumplen con los requisitos de la Misión A.I.D. con respecto a sus componentes.

6. **EXENCIONES**

Cualquier exención de las políticas indicadas en el párrafo 1b y que suavizarían las restricciones con respecto a compras locales, podrá ser autorizada por la Misión A.I.D. únicamente caso por caso.

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2.1.1

- c. Complete solicitation document, prior to issuance;
- d. The contractor selection method (may be part of approval of solicitation document);
- e. The selected contractor;
- f. Any host country decision to terminate negotiations with the highest ranked offeror and to initiate negotiations with the next ranked offeror or to reject all offers;
- g. The contract, prior to execution;
- h. Signed contract documents, before financing; and
- i. Contract administrative actions such as subcontracts, amendments, and change orders, as determined by the Mission and stipulated in a Project Implementation Letter.

2.1.2 AID approvals may also be required, at the Mission's discretion, for contracts with a lower value and/or for other actions taken by the Contracting Agency during the contracting process. Such additional approval requirements will be set forth in a Project Implementation Letter.

\*

2.1.3 The Mission Director is authorized to grant the above AID approvals. When approvals of contracting steps are required for contracts not anticipated to exceed \$250,000, this authority may be delegated to a senior Mission officer.

\*

2.2 Contracting Method

2.2.1 Rule

Contracts for professional and technical services are awarded on the basis of negotiation rather than on a formal bid basis. The selection of a prospective contractor with whom to negotiate is based exclusively on professional qualifications for the project. Price is not included with the technical proposals which are evaluated qualitatively based on the needs of the specific project. A price proposal is requested from the offeror submitting the highest ranked technical proposal and negotiations are conducted concerning both technical and cost proposals. If a satisfactory contract cannot be concluded, the Contracting Agency terminates negotiations with that contractor and initiates negotiations with the next ranked offeror.

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### 2.2.2 Exception

\* Exceptions to this rule may be authorized only by the Regional Assistant Administrator with the clearance of FA/PPE and GC/CCM. The request for the exception must fully explain the procedure to be used in evaluating both the technical and price elements of the proposal. \*

## 2.3 Debarment, Suspension, and Ineligibility

### 2.3.1 Rule

The Contracting Agency is required to refrain from awarding contracts to organizations and individuals that are suspended, debarred, or ineligible, as indicated on (1) the "List of Parties Excluded from Federal Nonprocurement Programs" and/or (2) the "Consolidated Lists of Designated Nationals". Prior to considering an award to organizations or individuals that are on the "List of Parties Excluded from Federal Procurement Programs," but are not on the former lists, the Contracting Agency is directed to request the AID Project Officer to consult with the AID/W General Counsel to consider whether additional debarment or suspension action is warranted.

### 2.3.2 Waivers

a. Exception with respect to parties listed on the "List of Parties Excluded from Federal Nonprocurement Programs" may only be made upon waiver by the AID Associate Administrator for Finance and Administration.

b. No waivers may be granted to the rule with respect to parties on the "Consolidated Lists of Designated Nationals."

## 2.4 Competition

### 2.4.1 Rule

AID requires that the Contracting Agency follow competitive procedures in procuring services with AID financing. Such competitive procedures include obtaining as many proposals as practical and competitive selection based on technical quality. Sections 3.3, 3.4, and 3.5 of this chapter are the usual steps in competitive negotiated procurement.

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2.4.1.1 Competition Without Advertising and Written Requests for Technical Proposals

In the following two cases, advertising and written requests for proposals are not required:

- a. If the services are to be performed personally by an individual, consideration of a reasonable number of candidates is recommended. (See Annex A.)
- b. If the estimated contract value does not exceed \$100,000, negotiation may be undertaken without formal solicitation of proposals from more than one source. However, informal solicitation of several sources is required unless a waiver of competition has been approved pursuant to Section 2.4.2 below.

2.4.1.2 Follow-on Work

If the Borrower/Grantee wishes to employ, for work related to project implementation, a contractor who has satisfactorily performed work in connection with the identification, development, or study of a project, competitive selection need not be used provided that 1) the contractor was initially selected on a competitive basis; 2) all competing firms were advised in the Commerce Business Daily notice, if any, and in the Request for Technical Proposals that the Contracting Agency reserved the right to contract with the selected contractor for specified subsequent work; and 3) the firm is eligible in accordance with 2.7. Work performed under the initial contract might be a sector assessment, project design, social studies, or a feasibility study covering technical, economic, financial, or environmental aspects of a defined project. Subsequent work might be engineering design, construction supervision, the provision of advisors needed for the execution of a project, or a combination of such services.

2.4.2 Waiver--Negotiation with a Single Source

a. Circumstances

- \* Competition in the procurement of services may be waived\* and negotiation with a single source authorized in accordance with paragraph c. below only under one of the following criteria. Waivers must be supported by a written record of the reasons for negotiation with only the single source.

---

\* If only one firm responds to a solicitation that has been advertised (if required by Section 2.5) and made available to all interested parties, technical and cost negotiations may be conducted with that firm without a waiver.

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2.4.2a

1. The Borrower/Grantee can demonstrate the existence of an emergency situation in which the requirement for competition would result in unacceptable project delay.

2. Special design or operational requirements require services available from only one source.

3. One firm can be demonstrated to have the unique capability by reason of special experience or facilities, or specialized personnel who are recognized as predominant experts in the particular field to perform the services required for the project.

4. The Borrower/Grantee desires to utilize a contractor previously engaged in the project for follow-on work and the contractor clearly has special capability by virtue of previous experience in the work but the contractor was either not initially selected on a competitive basis or the Contracting Agency did not advise all competing firms that a follow-on contract might result. A waiver on these grounds should be granted only after careful review of all pertinent facts. If the contract for the initial work specified that follow-on work might result, see Section 2.4.1.2.

5. Adherence to competitive procedures would result in the impairment of the objectives of the United States foreign assistance program or would not be in the best interests of the United States.

b. Amendments

Approval of an amendment to an existing contract which increases the scope of work or level of effort (i.e., a new procurement amendment is also required. Negotiation with the single source to amend the contract must be justified under one of the criteria in a.1 through a.5 above, and approved by the official who has the authority under c. below, for the estimated amount of the amendment.

c. Approval Authority

\*

1. AID/W Approval

A single source, negotiated procurement estimated to exceed \$10 million in value may be authorized by the Associate Administrator for Operations. If the estimated cost is less than \$10 million, the procurement may also be authorized by the cognizant Regional Assistant Administrator. In either case, prior clearance by the Agency Competition Advocate (FA/PPE) is required for procurements in excess of \$5 million.

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2.4.2c



## 2. Mission Approval

A single source, negotiated procurement estimated to cost \$5 million or less may be approved by the Mission Director. The Mission Director may delegate this approval authority to the Deputy Mission Director only for procurements that are estimated not to exceed \$250,000. For procurements estimated to be in excess of \$250,000, such approval must be based upon the recommendation of the Mission Noncompetitive Review Board, which is composed of at least three senior officers other than the approving officer, e.g., the Deputy Mission Director, the Mission or Regional Legal Advisor, a Contracting Officer, and a senior Project Officer not otherwise involved with the procurement under consideration.

### 2.5 Advertising

#### 2.5.1 Rule

Solicitation of potential contractors is effected through widely disseminated advertising. When the estimated value of a contract is anticipated to exceed \$100,000, a notice of the availability of prequalification questionnaires or, if prequalification is not used, Requests for Technical Proposals (RFTP) is published in the Commerce Business Daily of the U.S. Department of Commerce. The Contracting Agency may also utilize additional advertising in appropriate local, regional, and international journals, newspapers, etc., and otherwise in accordance with local practice. Additionally, when the fee for services in procurement services contracts is anticipated to exceed \$25,000, notice of the availability of prequalification questionnaires or the RFTP is published in the AID Procurement Information Bulletin.

#### 2.5.2 Exceptions

This rule does not apply to contracts with an individual (see Annex A and Section 2.4.1.1), follow-on work (Section 2.4.1.2), or to a waiver of competition (Section 2.4.2).

#### 2.5.3 Waivers

The requirement for advertising in the Commerce Business Daily may be waived by the Mission Director to avoid serious delay in project implementation, provided that efforts shall in any event be made to secure proposals from a reasonable number of potential contractors.



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## 2.6 Nationality and Source

2.6.1 The Project Agreement, Project Implementation Letters, and other related documents specify the authorized geographic code for nationality of services contractors and source for any related commodities.

### 2.6.2 Nationality Rule

#### 2.6.2.1 Privately Owned Commercial Suppliers

An individual or a privately owned commercial firm is eligible for financing by AID as a contractor or as a subcontractor providing services only if the criteria in subparagraphs a., b., or c., below are met and, in the case of the categories described in subparagraphs b. and c., the certification requirements in subparagraph d. are met.

a. The Supplier is an individual who is a citizen of and whose principal place of business is in a country or area included in the authorized geographic code or a non-U.S. citizen lawfully admitted for permanent residence in the United States whose principal place of business is in the United States.

b. The supplier is a privately owned commercial (i.e., for profit) corporation or partnership that is incorporated or legally organized under the laws of a country or area included in the authorized geographic code, has its principal place of business in a country or area included in the authorized geographic code, and meets the criteria set forth in either subparagraph (1) or (2), below:

(1) The corporation or partnership is more than 50% beneficially owned by individuals who are citizens of a country or area included in the authorized geographic code and non-U.S. citizens lawfully admitted for permanent residence in the United States. In the case of corporations "more than 50% beneficially owned" means that more than 50% of each class of stock is owned by such individuals; in the case of partnerships, "more than 50% beneficially owned" means that more than 50% of each category of partnership interest (e.g., general, limited) is owned by such individuals. (With respect to stock or interest held by companies, funds or institutions, the ultimate beneficial ownership by individuals is controlling.)

(2) The corporation or partnership:

(a) has been incorporated or legally organized in the United States for more than 3 years prior to the issuance date of the invitation for bids or request for proposals; and

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2.6.2.1b.(2)

(b) has performed within the United States similar administrative and technical, professional, or construction services under a contract or contracts for services and derived revenue therefrom in each of the 3 years prior to the date described in the preceding paragraph; and

(c) employs United States citizens and non-U.S. citizens lawfully admitted for permanent residence in the United States in more than half its permanent full-time positions in the United States; and

(d) has the existing capability or can provide the necessary resources in the United States to perform the contract.

c. The supplier is a joint venture or unincorporated association consisting entirely of individuals, corporations, partnerships, or non-profit organizations which are eligible under subparagraph 2.6.2.1.a. or paragraph b., above, or subparagraph 2.6.2.2 below.

d. A duly authorized officer of a firm or nonprofit organization shall certify that the participating firm or nonprofit organization meets either the requirements of subparagraphs 2.6.2.1.b(1) or (2), or 2.6.2.2. In the case of corporations, the certifying officer shall be the corporate secretary. With respect to the requirements of subparagraph b(1), the certifying officer may presume citizenship on the basis of the stockholder's record address, provided the certifying officer certifies, regarding any stockholder (including any corporate fund or institutional stockholder) whole holdings are material to the corporation's eligibility, that the certifying officer knows of no fact which might rebut that presumption.

2.6.2.2 Nonprofit Organizations

Nonprofit organizations, such as educational institutions, foundations, and associations, are eligible for financing by AID as contractors or subcontractors for services if they meet all of the criteria listed in subparagraphs a., b., and c. below, and the certification requirement in subparagraph 2.6.2.1.d., above is met.

Any such institution must:

a. Be organized under the laws of a country or area included in the authorized geographic code; and

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#### 2.6.2.2

b. Be controlled and managed by a governing body, a majority of whose members are citizens of countries or areas included in the authorized geographic code; and

c. Have its principal facilities and offices in a country or area included in the authorized geographic code.

#### 2.6.2.3 Government-Owned Organizations

Firms operated as commercial companies or other organizations (including non-profit organizations other than public educational institutions) which are wholly or partially owned by governments or agencies thereof are not eligible for financing by AID as contractors or subcontractors, except if their eligibility has been established by a waiver in accordance with the provisions in subparagraphs 2.6.2.6.a(2) and 2.6.2.6.d, below.

#### 2.6.2.4 Joint Ventures

A joint venture or unincorporated association is eligible only if each of its members is eligible in accordance with subparagraphs 2.6.2.1, 2.6.2.2, or 2.6.2.3, above.

#### 2.6.2.5 Ineligible Suppliers of Commodities and Services

Citizens of any country or area, and firms and organizations located in or organized under the laws of any country or areas which is not included in Geographic Code 935 are ineligible for financing by AID as suppliers of services or commodities, or as agents acting in connection with the supply of services, except that non-U.S. citizens lawfully admitted for permanent residence in the United States are eligible regardless of such citizenship.

#### 2.6.2.6 Waiver

##### a. Criteria

A waiver to authorize a different geographic code or include additional suppliers must be based on one of the following criteria:

##### (1) Privately Owned Commercial Suppliers

(a) There is an emergency requirement for when non-AID funds are unavailable and the requirement can be met in time only from suppliers in a country or area not included in the authorized geographic code.

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2.6.2.6.a.(1)

(b) No suppliers from countries or areas included in the authorized geographic code are able to provide the required services.

(c) Persuasive political considerations.

(d) Procurement of locally available services (where the cooperating country is not already eligible) would best promote the objectives of the foreign assistance program.

(e) Such other circumstances as are determined to be critical to the achievement of project objectives.

(2) Government-Owned Organizations

In addition, or alternatively if a change in the geographic code is not required, a waiver to make government-owned organizations described in subparagraph 2.6.2.3., above, eligible for financing by AID must be justified on the basis of the following criteria:

(a) The competition for obtaining a contract will be limited to host country firms or organizations meeting the criteria set forth in subparagraphs 2.6.2.1 or 2.6.2.2, above; or

(b) The competition for obtaining the contract will be open to firms from countries or areas included in the authorized geographic code and eligible under the provisions of subparagraphs 2.6.2.1 or 2.6.2.2, above, but it has been demonstrated through prequalification that no U.S. firm is interested in competing for the contract; or

(c) The competition for obtaining the contract will be open to firms from countries or areas included in the authorized geographic code and it has been demonstrated, through prequalification or otherwise, that one or more U.S. firms are interested in competing for the contract but the foreign policy interests of the United States outweigh any competitive disadvantage at which U.S. firms might be placed or any conflict of interest that might arise by permitting a government-owned organization to compete for the contract.

b. Certification Supporting Waivers to Codes 899 or 935

Waivers from Codes 000 or 941 to Codes 899 or 935, in addition to meeting one of the criteria in subparagraph 2.6.2.6.a, must be supported by the following certification: "The interests of the United States are best served by permitting the procurement of services from Free World countries other than the cooperating country and countries included in Code 941."

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2.6.2.6

\*

c. Authority to Grant Waivers of Authorized Geographic Code\*

(1) Other than provided in (2) and (3) below, only the Administrator is authorized to grant blanket waivers of source policies that are intended to apply to an entire country program for project assistance.

(2) Assistant Administrators may grant waivers for individual transactions and for blanket waivers which apply to an entire project agreement. For projects in the Least Developed Countries\*\* where the authorized Geographic Code is 941 Assistant Administrators may also grant blanket waivers to include the Cooperating Country as an eligible source for the project.

(3) Mission Directors may grant waivers to the extent that such authority is redelegated by their cognizant Assistant Administrators.

(4) A waiver is not required for any individual transaction whose value does not exceed \$5,000, exclusive of transportation costs.

d. Authority to Grant Waivers to Make Government-Owned Organizations Eligible

(1) Waivers justified on the grounds of United States foreign policy interests under the provisions of subparagraph 2.6.2.6.a(2)(c) above, must be authorized by the Assistant Administrator having program responsibility after consultation with the Deputy Associate Administrator for Finance and Administration (DAA/FA) and GC.

(2) Waivers based on the criteria listed in subparagraph 2.6.2.6.a(2)(a) or (b) may be granted by the Mission Director.

e. Consultation

(1) AID/W-issued waivers

All waivers issued in AID/W under the authority of AID Delegation of Authority 405 or any redelegations thereunder shall indicate consultation with GC and FA/OP.

\*The authority to approve waivers is contained in AID Delegation of Authority 405 and redelegations thereunder.

\*\*See HB 1B, Chap 5A1d, on procurement from the Least Developed Countries (LDC's)

\*

\* REVISED

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2.6.2.6e



(2) Mission-issued waivers

Copies of all Mission-issued waivers under the authority of AID Delegation of Authority 405 or any redelegation thereunder, including those covered by a project paper or project authorization, shall indicate consultation with the Regional Legal Advisor if available. Missions must keep track of waivers in accordance with the Buy America Reporting Requirements.



2.6.3 Nationality of Employees under Contracts and Subcontracts for Services

The nationality policy of subparagraph 2.6.2.1, above, does not apply to the employees of contractors or subcontractors. Such employees must, however, be citizens of countries included in Geographic Code 935 or, if they are not, have been lawfully admitted for permanent residence in the United States.

2.6.4 Source Rule

Source and origin requirements for commodities are discussed in Section 4.3.24. The requirements apply to any country contract which includes an element of commodity procurement.

2.7 Other Factors Affecting the Eligibility of Firms to Compete for the Contract

In addition to the eligibility criteria in Sections 2.3 and 2.6, above, firms may be ineligible for AID-financed contracts for any of the following reasons:

2.7.1 A firm, including its affiliates and subsidiaries, should not be employed to perform services when, in the judgment of the AID official authorized to approve the contract, the firm has been, or might be, placed in a position where its judgment may be biased, or where it has achieved an unfair competitive advantage. However, a firm will not be disqualified solely because it was previously employed to make a feasibility study, participate in sector assessments or project design, or perform other technical or engineering services for a single project provided it is otherwise qualified for detailed design, supervision, or rendering of other subsequent technical services for the project.

2.7.2 Unless specifically approved by the AID official authorized to approve the contract (for example, turnkey jobs or other exceptional circumstances), no firm, including its affiliates and subsidiaries, may perform engineering services and provide commodities or perform construction services on the same project.



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2.7.3 Any firm incorporated or legally organized in the United States is eligible for an AID-financed contract only if it certifies prior to contract award that it is in compliance with its equal employment opportunity obligations under Executive Order 11246, as amended, and regulations and orders issued thereunder. This requirement may be waived only by the AID Administrator.

## 2.8 Language and Specifications

2.8.1 Contracts and other documents submitted to AID shall be in English unless AID otherwise agrees in writing. Notices and solicitations to be published and/or disseminated in the United States shall be prepared in English in any event.



2.8.2 The metric system of measurement shall be used for specifications that are incorporated in or required by AID-financed contracts unless AID determines in writing that such use is impractical or is likely to cause significant inefficiencies or the loss of markets to U.S. firms.



## 2.9 Prohibition Against Certain Types of Contracts

In no event will AID finance a cost-plus-percentage-of-cost contract; i.e., a contract in which the profit or fee (however described) increases without limitation as the cost of the contract increases. Nor will AID finance a contract for engineering services when the price is expressed as a percentage of the final cost of construction of a facility.

## 2.10 Documentation for Payment

Each AID-financed contract must require that claims by contractors for payment or reimbursement for goods and services be supported by appropriate and complete documentation, including the "Contractor's Certificate and Agreement with the Agency for International Development" (form AID 1440-3), which is usually specified in the Project Implementation Letter or other related documents. (See Section 2.12.3.)

## 2.11 Submission of Contracts to AID

The Mission will inform the Contracting Agency how many copies of the final executed contract and amendments are to be submitted to AID. The Regional Bureau shall advise the Mission of AID/W distribution requirements.

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\* 2.12 Mandatory Contract Clauses

The mandatory contract clauses set forth in this section must be included in every AID-financed professional and technical services contract under the conditions discussed below. There are other clauses, discussed in Section 4.3, which are sound contracting practice but not required on a mandatory basis.

2.12.1 Legal Effect of AID Approvals and Decisions

AID requires the reservation of certain approval rights with respect to the contract but must not incur legal liability by reason of the exercise of those rights. The clause in Section 5.11 which must be included verbatim in each contract, does not itself reserve approvals; it does recognize AID's role as the financing entity and protects AID against exposure to liability.

2.12.2 Nationality

The contract must state the eligible nationality of any subcontractors for services. The eligible countries must match those stated in the Project Agreement unless a waiver has been obtained (see Section 2.6.2.3). The nationality requirements arise from a number of U.S. Government statutes and regulations. While the language contained in the clause in Section 5.22 is not required to be used verbatim, any changes should be carefully worked out because this is a very complex subject.

2.12.3 Contractor's Certificate and Agreement with the Agency for International Development/Invoice and Contract Abstract (Form AID 1440-3)

The contract must require the contractor to submit a "Contractor's Certificate and Agreement with the Agency for International Development/Invoice and Contract Abstract" (form AID 1440-3), Attachment 1L, executed in accordance with instructions thereon, with each request for payment. This requirement may be waived only by AID/W (DAA/FA, with concurrence of GC).

\*

2.12.4 Air Travel and Transportation

a. Grant-Financed Contracts

A U.S. Government statute requires the use of U.S. flag air carriers for all AID grant-financed international air travel and transportation unless such service is not available. When U.S. flag air carriers are not available, any Code 935 flag air carrier may be used. The language defining "available" and "unavailable" carriers in Section 5.23 must be used verbatim in grant-financed country contracts.

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#### 2.12.4

##### b. Loan-Financed Contracts

(1) There is no statutory requirement for use of U.S. flag air carriers under loan-financed contracts.

(2) When the authorized source under a loan is Code 000, AID's policy on financing air transportation is the same as under grant-financed contracts (paragraph a. above).

(3) When the authorized source under a loan is Code 941, AID policy requires use of cooperating country flag air carriers, U.S. flag air carriers, or other Code 941 flag air carriers for international air travel and transportation to the extent they are available in accordance with the criteria in the clause in Section 5.23. If the contractor certifies that authorized carriers are unavailable, any Code 899 flag air carrier may be used.

#### 2.12.5 Worker's Compensation Insurance

Worker's compensation insurance must be provided under all services contracts financed by AID, often in the form of Defense Base Act insurance. This clause is discussed in detail in Section 4.3.41.

#### 2.12.6 Participant Training

When a contract provides for participant training, i.e., the training of non-U.S. nationals outside their home countries, the contract must include a clause (see Sections 4.3.44 and 5.44) which incorporates into the contract, by reference, AID Handbook 10, Participant Training, and requires the contractor to follow the provisions of that handbook and attendant Participant Training Notices.

#### 2.12.7 Host Country Taxes

AID funds may not be used to pay identifiable taxes of the host government or its political subdivisions. This basic exemption is generally set forth in the bilateral agreement between the U.S. and host governments. The contract must contain a clause (see Sections 4.3.20 and 5.20) applying the exemption to the particular contract.

#### 2.12.8 Settlement of Disputes

The contract must contain a clause (See 5.27) which specifies impartial and effective procedures to resolve disputes that arise from the performance of the contract for which an amicable settlement can not be reached. The clause and the permissible modifications to it are discussed in 4.3.27.

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2.12.9 Disposition of Personal Property in the Cooperating Country

The contractor's employees, the contractor--if the contract is with an individual, and family members thereof will not be permitted to retain profits from the disposition of personal property that was acquired in or was imported into the Cooperating Country and was exempted from import restrictions, customs duties, or taxes by virtue of the individual's status under an AID-financed contract. The contract must contain a clause (see Sections 4.3.28 and 5.28) which restricts the disposition of such personal property in accordance with the rules contained in 22 CFR Part 136 to the extent that these rules are applicable to the employees of U.S. Government contractors in the Cooperating Country.

\* 2.12.10 Equal Employment Opportunity

A contract with a U.S. firm must include a clause requiring the contractor to be in compliance with its equal employment opportunity obligations under Executive Order 11246, as amended, and regulations and orders issued thereunder. This requirement may be waived only by the AID Administrator. (See Sections 4.3.39 and 5.39.) \*

3.0 Guidance

3.0.1 The application of the guidance in this Section 3 should be based on the circumstances of the procurement.

3.0.2 The normal considerations in country contracting are:

Choice of type of contract

AID approvals

Prequalification

Use of prequalification

Advertising

Distribution of prequalification questionnaires

Submission of prequalification questionnaires

Analysis of prequalification information and

establishment of a "shortlist"

Advice to firms seeking prequalification

Contractor Selection

Preparation of the Request for Technical Proposals (RFTP)

Advertising (if prequalification was not used)

Distribution of RFTP

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### 3.0.2

Receipt and analysis of Technical Proposals  
 Selection of contractor  
 Advice to firms  
 Contract Preparation  
   Invitation to negotiate  
   Preparation of cost estimate by Contracting Agency  
   Negotiations  
   Draft contract  
   AID approval of draft contract  
   Signature of contract and required AID approval  
   Determination of the Method of Payment  
   Contract administration

### 3.1 Choice of Type of Contract

#### 3.1.1 General

The Contracting Agency decides which type of contract is most appropriate for the specific procurement as the first step in the contracting process after the general outline of the work to be performed by the contractor has been developed during the project development process.

The three types of contracts most often used for procuring technical or professional services are discussed below. Other types of contracts, or a combination of these, may also be used, subject to the rule in Section 2.9.

#### 3.1.2 Cost Reimbursement (With or Without Fee)

Cost reimbursement contracts are advisable when uncertainties in the amount of work, or the conditions under which the work must be performed, make accurate determination of the costs involved impossible. This type of contract entitles the contractor to reimbursement of all its reasonable, allowable, and allocable costs incurred in performing the work, plus a fixed fee. Nonprofit organizations are usually not entitled to a fixed fee.

Cost reimbursement contracts should incorporate the cost principles of Chapter 4 of this handbook and include an agreed budget which the contractor may not exceed without advance approval by the Contracting Agency. The budget sets forth the limitations on direct costs (e.g., salary, allowances, travel, commodities, etc.), indirect costs (e.g., overhead), and the fixed fee.



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**REGIONAL AGRICULTURAL HIGHER EDUCATION PROJECT  
CATIE COMPONENT**

**Contract No. ROCAP 596-0129**

**FINAL EVALUATION**

**Prepared for:**

**AID ROCAP**

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**Chemonics International**

**December 1992**

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## LIST OF ACRONYMS

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AGIICAT	Costa Rican chapter of the CATIE alumni association
CA/P	Central America and Panama
CATIE	Tropical Agricultural Center for Research and Education, Costa Rica
CATIENET	Electronic communications network for CATIE and its clients
CIAT	International Center for Tropical Agriculture, Colombia
COFISA	Corporación de Financiamiento Industrial, S.A.
CONICIT	National Council for Scientific and Technology Research, Costa Rica
EARTH	Agricultural College for the Humid Tropical Region
FAO	U.N. Food and Agriculture Organization
GIS	Geographical information system
LABA	Inter-American Board of Agriculture
IARCs	International Agricultural Research Centers
ICRAF	International Council for Research in Agroforestry
IDMC	International Development Management Center
IDRC	International Development Research Centre
IICA	Inter-American Institute for Cooperation on Agriculture
INCAE	Central American Institute for Business Administration
IPM	Integrated Pest Management project
ISU	Iowa State University
MADELENA-3	Promotion of Multipurpose Trees project
MOU	Memorandum of understanding
NGO	Nongovernmental organization
PASE	Program of Alumni Support and Supervision
PROCACAO	Regional Network on Generation and Transfer of Technology in Cacao
REDCA	Regional Network for Cooperation in Education and Research in Agriculture and Renewable Natural Resources
RENARM	Regional Natural Resources Management project
RHE	Regional Agricultural Higher Education project, AID ROCAP
RIEPT	International Network for Evaluation of Tropical Pastures
RISPAL	Latin American Research Network on Animal Production Systems
ROCAP	AID Regional Office for Central America and Panama
SIIF	Integrated financial information system
UCA	Universidad Centroamericana, El Salvador
UCR	University of Costa Rica
UNICO	Universidad Catolica del Oriente, El Salvador
USAID	U.S. Agency for International Development

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## EXECUTIVE SUMMARY

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### A. Project Background

The goal of the CATIE Regional Agricultural Higher Education project is to increase agricultural productivity in Central America and Panama by helping develop a professional human resources base with the necessary practical and educational experience. This evaluation was carried out in October-November 1992 by a team of five specialists.

### B. Overall Project Management and Resource Allocation

#### B1. CATIE Structure and Management Practices

CATIE's management structure has been strengthened during the project period. The functions of the Board of Directors were divided, giving CATIE stronger support for its postgraduate program. CATIE's director has taken steps to improve accountability and financial viability. At the same time, however, CATIE's management style has been top-heavy and in need of shifting responsibility to the operating levels. Better accountability and efficiency could be attained by such changes.

#### B2. Planning and Budgetary Practices

With the project's assistance, several important steps have been taken to improve planning and budgeting. Management seeks to establish two levels: a strategic plan adapted to the region's economic and political situation and a two-year action plan revised annually to build a link between short-term budgeting and strategic planning. The support needed to implement this process is now becoming available through implementation of an integrated financial information system. In practice, however, there are still problems integrating planning and budgeting for CATIE as a whole.

#### B3. Accounting System

The evaluation team found that CATIE's accounting system meets the requirements for producing timely and accurate financial reports. However, accounting at CATIE follows guidelines from the Board and not generally accepted accounting principles. This method is not adequate for sound management and should be corrected as soon as possible.

### C. Institutional Policies and Practices Related to the Project

#### C1. Student Selection

CATIE gives an examination to all applicants that accounts for 40 percent of their entrance score. Beginning in 1993, the Center plans to gradually increase the weight of the examination from 40 percent to 80 percent to increase the quality of incoming students.

## **C2. Postgraduate Program Financial Controls and Auditing**

The internal auditor is not fully trained in AID procedures and regulations. In addition, CATIE should use its budget more effectively as a management tool. More control is needed to avoid authorizing disbursements when there are no more funds available.

### **D. CATIE's Long-term Financial Environment**

CATIE's income and expense forecasts do not predict major difficulties financing the Center's cash flow. Nevertheless CATIE must make all possible efforts to secure donors and other sources of funds to guarantee normal research and teaching activities. A fundraising campaign should be carried out to form an endowment fund to secure CATIE's long-term financial standing. Funding is also needed for scholarship and financial assistance, staff career development, and improvement of administrative and support services.

#### **D1. Other Financial Viability Issues**

The present tuition of \$5,000 per student per year is insufficient. In order to cover costs only, tuition would have to be \$6,267. In addition, a more active relationship with the country members of CATIE is needed, as is an effort to eliminate delays in quota payments.

### **E. Staff Development in Postgraduate Programs**

#### **E1. Program Stability and Continuity of Teaching Staff**

Faculty expansion was accomplished as stated in the Project Paper. The additional teachers provided stability and continuity during the project years.

Overall, 42 of CATIE's 52 principal technical staff, 11 of the 29 associate principal staff, and 15 of the 99 support staff are involved in educational activities at CATIE. This total equals 38 percent of all technical staff.

Some of the research projects have taken on additional teaching responsibilities to help fill the gap in core funding. This action may have had a positive effect by linking postgraduate instruction and research. In early 1992, however, the still small number of positions funded by the core budget left the postgraduate program in a relatively unstable position and heavily dependent on variations in research project funding.

#### **E2. Staff Recruitment, Selection, and Retention**

Successful retention of staff during the project period was not a problem because of the care taken in recruiting and the long-term funding available. Nevertheless the overall turnover rate for faculty is fairly high.

The Board of Directors is currently taking steps to improve retention of faculty, including plans to establish an endowment. For the short term, aggressive efforts are

underway to reduce non-essential administrative and support staff and increase farm production for sale. Staff turnover is also being addressed by other proposed incentives, including exchange and leave programs.

## **F. Human Resources Development**

### **F1. Curriculum Development and Implementation**

The RHE project helped create a systematic curriculum development process. Courses have well defined analytic content, though there is still room to reduce ambiguity. Today, staff is hired with clearly defined responsibilities for education and research.

In general, the research and education components of CATIE interact well. The graduate topics are based on the research program areas, and the faculty in most cases are involved in both research and teaching programs.

### **F2. Human Resources**

Strengthened by the RHE project and CATIE's direct administration, the graduate program reached a peak in 1989 of 58 students, and from 1986-1992, 314 students received M.Sc. degrees—57 percent above the stated target. Moreover, training doubled during project implementation, reaching 6,335 professionals (81 percent above target). Currently, 45 percent of the training is done at CATIE and the rest is carried out in country.

### **F3. Participation of CA/P Countries**

The participation of students from Central America and Panama was increased by the project. Nearly 70 percent of current students are from CATIE member countries, while other Latin American and Caribbean countries reduced their participation to 25 percent.

## **G. CATIE Development Office and Alumni Affairs Programs**

### **G1. Development Office**

Renovation of suitable offices for development was carried out, and the office started work as planned. After its first year of operation, however, it was discontinued because it focused on donations in violation of the original purpose of not asking for charity. ?

CATIE remains very weak in corporate relations activities. Donor relations and fundraising have not been well organized, and the Center has had difficulty meeting its financial needs in a way that does not distort the institution's basic mission.

### **G2. Alumni Affairs Office Programs**

The alumni affairs office was established as planned, but the outcome was contrary to expectations. The strategy was to establish relationships in which CATIE would gain from

the involvement of its former students in fundraising. What instead happened was these alumni turned to CATIE for financial support. Overall, CATIE's development work during the project period did not produce an effective marketing strategy directed at governments, foundations, international organizations, or alumni.

## **H. Networking**

### **H1. REDCA**

CATIE's principal networking action was the founding and support of the Regional Network for cooperation in Education and Research in Agriculture and renewable Natural Resources. REDCA's national activities represent the most positive result of the project's networking component. Its formation provided an opportunity for institutions to share information, collaborate on course development, and implement cooperative projects.

CATIE has significantly increased the number of clients it reaches in member countries via support of the REDCA committees. As the project ends, however, these committees will need to take greater financial responsibility for their activities.

### **H2. Alumni Support**

The alumni association in Costa Rica (AGIICAT) has 50 dues-paying members, is well organized, conducts regular monthly meetings, and has a dynamic leadership. Its accomplishments include a monthly newsletter and successfully lobbying of the Costa Rican government. AGIICAT plans to establish a consulting firm and develop a resume database of its members to help them find assignments on a fee basis.

## **I. Use of Local Currency Trust Funds**

### **II. Specific Trust Fund Activity Accomplishments**

During the project, income from farm produce sales varied but showed little overall growth, affected as it was by declining commodity prices. Activities operated on lands not needed for research appear to be a net drain on financial resources. These farms should be run as distinct cost centers, and if found to be uneconomical or not essential to CATIE's programs, they should be rented to commercial producers to raise funds.

### **I2. Facilities and Equipment**

The quality and design of buildings, equipment, facilities, and vehicles purchased with the project's local currency and dollar funds is adequate. Among the staff overseeing bids, selection of contractors, and supervision of building projects, however, there was not always enough concern about or analysis of the cost factors involved to ensure that the actual purchase prices and conditions were the best available to CATIE. Moreover, CATIE has not always complied fully with its own procurement procedures.

## **J. Lessons Learned**

### **J1. Management and Resource Allocation**

The staff positions funded under this project were assigned to research departments, though they maintained specific teaching and thesis supervision responsibilities. This approach helped gain fuller participation of the research departments. Many research contracts are now negotiated with teaching responsibilities included in the job descriptions.

### **J2. Staff Development**

Sufficient monetary compensation is basic to attracting top personnel. However, many professionals are drawn by other incentives such as opportunities for professional growth through cooperative work and exchange of ideas with other specialists in their fields.

### **J3. Curriculum, Development, and Alumni Affairs**

Concerted efforts are needed from all of CATIE's personnel, associates, and friends to strengthen marketing and skills and reinforce the Center's identity and pertinence.

The curriculum needs continued upgrading. In the past, CATIE prepared its students for a future of research, teaching, or Ph.D. pursuit. Now societies in the region are asking for professionals to strengthen government institutions and private enterprises.

### **J4. Local Currency Trust Funds**

Without the local currency component, CATIE would have been severely handicapped in its efforts to double the number of graduate students and improve the quality of education. While the dollar funding was basic for expanding the staff dedicated principally to teaching, the local currency provided needed buildings and equipment.

**SECTION I**

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**PROJECT BACKGROUND**

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## SECTION I PROJECT BACKGROUND

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### A. Project Funding

The Regional Agricultural Higher Education project (ROCAP 596-0129) was designed to support both CATIE (Part A) and EARTH (Part B). The original project includes a six-year \$7 million component for the CATIE portion. It also contains a local currency trust fund which provides part of the Government of Costa Rica's counterpart for the CATIE project. This evaluation covers only the CATIE component.

The CATIE-implemented component, referred to in this report as the project, began in August 1985 and was originally scheduled to be completed in August 1991. In July 1991, it was extended through March 1993 and an additional \$1.3 million was approved, for a life-of-project total of \$8.3 million.

The project extension was based largely on a 1990 external review that recommended additional time for CATIE to meet all of the conditions expected at the end of the project under the original agreement. The review noted that CATIE was unable to marshal the needed commitments during the original life of project to assure financial self-sufficiency of the educational program. The extension was granted because of the accomplishments of the original project, including better curricula, expanded teaching and research facilities, and CATIE's significantly improved internal financial and program management.

CATIE also received local currency funding under Part B of the original project through a Trust Agreement between AID and the Corporación de Financiamiento Industrial, S.A. (COFISA), signed on March 27, 1985. These funds were to expand CATIE's physical facilities to accommodate increases in the student body, faculty, and staff, as well as additions to the curriculum and institutional programs approved by ROCAP and CATIE in the overall project agreement.

This increase in physical infrastructure included construction of new faculty housing, the graduate education building, computer center, primary school, cafeteria, and audiovisual center, as well as the upgrading of existing student housing. ROCAP also approved funds to build and/or renovate facilities at the La Lola agricultural experiment station and to rehabilitate and/or expand CATIE's basic water and electricity systems. Technical assistance provided for under the local currency funds help develop a master facilities and maintenance plan for the CATIE campus.

### B. CATIE, the Implementing Institution

CATIE, the Tropical Agricultural Center for Research and Education, is considered Central America's leading tropical research and graduate education. It provides technical

advice, short course and internship training, and selected plant and animal germplasm to collaborators in Central America, Panama, and the Dominican Republic.

CATIE is an outgrowth of the InterAmerican Institute of Agricultural Sciences (IICA), established in 1942 on the current site in Turrialba, Costa Rica. CATIE was founded in 1973 by a contract between the Government of Costa Rica and IICA which provides usufructuary rights to IICA's properties and facilities at Turrialba. This contract was amended in 1983 and extended for another 20 years. Since 1973, nine countries have become members of CATIE: Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua, Panama, and most recently Mexico and Venezuela.

CATIE's activities include scientific research in agriculture and natural resources in the American tropics, particularly Central America and the Caribbean; and education in agricultural sciences and natural resources through graduate studies leading to a master's degree and other diverse forms of training. While CATIE's training mandate includes all of Latin America, the Center strives to focus its research—and hence its development impact—on the people of Central America and the Dominican Republic.

### **C. Project Objectives**

The Regional Agricultural Higher Education project's goal, purpose, and expected achievements were defined at initiation as follows:

The goal of the project is to increase agricultural productivity in Central America and Panama, thereby enhancing rural economic growth and employment opportunities. The project's purpose is to produce a professional human resources base with the practical and educational experience needed to address the agricultural production problems of the Central America and Panama region.

Specific achievements expected at CATIE were: expanded and upgraded graduate studies and non-degree programs; approximately 60 Master of Science candidates completing training annually; approximately 4,000 professionals trained through short courses and specialized training; and increased institutional linkages through networking activities. When the project was extended in July 1991, the magnitude of expected outputs was revised to 200 M.Sc. degrees awarded, 19 teaching faculty, 211 non-degree training programs, a long-term financial plan in place, and a developed endowment plan.

**SECTION II**

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**EVALUATION OBJECTIVES AND PROCEDURE**

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## SECTION II

### EVALUATION OBJECTIVES AND PROCEDURE

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The objective of this evaluation was to review the use of financial resources provided under the Regional Agricultural Higher Education project and assess the performance of CATIE in expanding and developing its graduate studies and non-degree programs. The evaluation was to address activities that were financed directly by U.S. dollars, such as staff and administrative development, curriculum, networking, equipment, and endowment planning, as well as those funded directly by the project's local currency component.

The evaluators were also to perform a comprehensive review of CATIE's compliance with the terms and conditions under which the Center would continue to receive income generated by the trust fund.

The final objective of the evaluation was the identification of lessons learned during the project that may have long-term implications for CATIE's role in supporting sustainable agriculture and natural resources management in the region.

Annex 19 contains the complete Statement of Work for the evaluation team.

The evaluation was carried out in October-November 1992 by a team of five specialists selected by ROCAP. CATIE provided office space and full staff cooperation in supplying information and assembling existing data. A list of the documents reviewed by the evaluation team is attached as Annex 20.

**SECTION III**

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**FINDINGS OF THE EVALUATION**

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**SECTION III**  
**FINDINGS OF THE EVALUATION**

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**A. Overall Project Management and Resource Allocation**

**A1. CATIE Structure and Management Practices**

CATIE's management structure has been strengthened during the project period. Significant changes have been implemented during the past two years, beginning with the InterAmerican Board of Agriculture's approval in September 1991 of modifications to CATIE's basic contract with the Costa Rican government.

Under the revised contract the functions of the Board of Directors were separated into two layers: a Council of Ministers to provide long-term strategic direction to the Board; and a Board of Directors that is the administrative policy setting body. Each entity has explicitly defined functions specified in the new contract.

The membership of the Council of Ministers consists of one appointee connected with the agriculture and/or natural resources sector designated by each member country (presently nine).

The Board of Directors has 10 members, chosen based on aptitude and character, and not as representatives of any government or organization. The selection of members aims to achieve a balance among technical, administrative, and financial competence that will provide guidance and supervision to CATIE. The most recent Board was installed in March 1992.

By separating the two functions and strengthening the technical quality and continuity of the Board, IABA has created a stronger support entity for CATIE and thus for the postgraduate program which this project has sought to improve.

With the support of the new Board, and in response to budget limitations, the director of CATIE has taken several steps to improve accountability and financial viability, including eliminating two deputy directors and one department director and combining selected management activities.

At project start-up CATIE had three subject departments: crop production, animal production, and renewable natural resources. Today, this work has been consolidated into two departments: sustainable agriculture and integrated management of natural resources. These modifications reflect CATIE's changing perceptions of need and its funding organizations' changing demands.

The organization chart on page III-17 shows the present governing and management structure of CATIE.

Overall, the above changes have had a positive effect on staff morale. However, it must be made clear that these changes have affected only the final stages of project implementation. They are noted here as important aspects of institutional development that can be expected to have positive long-term effects on CATIE's postgraduate program.

#### **A1a. Delegation of Authority and Accountability**

One main issue raised by the external review was the need for greater program responsibility and management involvement by the directors of the three research programs in order to increase efficiency and reduce costs. This issue has now been addressed by the changes mentioned, i.e., eliminating one management layer. In addition the program directors are working members of a very active Management Committee, and they have first responsibility for preparing annual plans and consolidated budgets for their programs.

With regard to accountability, the Project Paper specified that the coordinator of the M.Sc. program was also the project manager and thus served as the contact for ROCAP staff on all implementation matters. In procurement of goods and services, CATIE acted as its own agent due to its experience with ROCAP projects and familiarity with AID regulations.

Meanwhile, the director of the Department of Graduate Studies and Training and a project-financed coordinator of the M.S. program were expected to work with relevant CATIE officers to ensure that construction, procurement, and ancillary project elements were carried out in a timely manner.

#### **A1b. Management Style, Systems, and Leadership**

In the past CATIE's management style has been characterized as top-heavy and in need of shifting more responsibility to the operating levels. Many feel that better accountability and efficiency could be attained by such changes. Several aspects of CATIE's response to these points have been discussed above and in Section III.C, below. In addition, other management improvements are addressing these issues, specifically:

- A contract with IDMC to provide management advice and improve the Human Resources Office's effectiveness in assessing the performance of CATIE personnel. IDMC will also develop and install a system with which CATIE can calculate and track the core overhead costs associated with its provision of services to projects.
- Development and installation of an integrated financial information system (SIIF) for all components of CATIE, including the graduate program, that will improve the quality of the budgeting and financial decision making processes.

### **A1c. Planning and Budgetary Practices**

With the project's assistance, several important steps have been taken by CATIE's management to improve planning and budgeting.

In 1987 CATIE issued a 10-year strategic plan for 1988-1997 based on the regional development priorities seen at that time. In August 1990, the external evaluation recommended that the overall objective of CATIE's programs be: "education and research in agricultural production for a sustainable environment." The report also suggested CATIE establish its own priorities based on its comparative advantages in the region, that is, its knowledge and experience in natural resources, plant protection, forestry and agroforestry, and education and training of human resources for the American tropics. The most recent strategic plan "Agenda for a Critical Decade" (October 1992), takes this process further by redefining CATIE's priorities as:

"Development of sustainable agriculture and conservation of natural resources in fragile ecosystems of the American tropics, especially production systems for small- and medium-sized producers."

More important, the present plan seeks to establish two levels: a strategic plan adapted to the region's economic and political situation, and which would serve as a reference point for future actions; and a two-year action plan revised annually to build a continuous link between short-term budgeting and strategic planning.

The internal support needed to implement this planning and budgetary process is now becoming available through SIIF and the computer services of the Information Unit. In practice, however, there are still problems integrating planning and budgeting for CATIE as a whole. Long-term planning is especially difficult because of the limited core budget and the heavy reliance on short-term contracts.

In the evaluators' opinion, the planning process must be improved to cope with the objectives of the institution and to use resources in a more efficient way. CATIE should conduct a review of its planning procedures. A diagnosis of the actual situation and the determination of weaknesses, strengths, opportunities and potential problems, as well as an inventory of resources, is essential to the planning process.

**Budget process.** The budget process should be integrated more closely with analysis and operational planning and linked to well-defined strategic objectives for the short, medium, and long terms. A long-term capital budget is needed that complies with these objectives.

**Budget preparation.** Budget preparation is coordinated by the deputy director general and the director of administration and finance. For 1992-1993 there was no written communication to the program directors and section heads about budget preparation, objectives, or strategies established by the Board of Directors, nor of the final approved .

budget. The involvement of these officers would generate greater commitment to institutional objectives.

**Cost-benefit analysis.** Budgeting at CATIE is a history-based process, performed mainly by incrementing the previous budget. At least every two or three years, a cost-benefit analysis should be conducted for many of the budget items, thus creating what might be called a zero-based budget.

**Budget presentation.** Figures are condensed into very few items of income and expenses. There should be an aide-mémoire listing the parameters used in the calculation of each item.

**Project budgets.** The preparation of each project's budget should become more technical and managerial. Research leaders need more assistance in preparing their budgets, and this aid should come from the director of administration and finance.

There should also be more advice on budget management, cost determination, and controls given to individuals responsible for project preparation, to assure better implementation. Even before project contracting, this step could lead to more successful negotiations.

**Follow-up.** A follow-up on budget performance should be provided to staff responsible for projects to help them make decisions to optimize results and to encourage integration with the general objectives of CATIE. Over the years some projects have been more geared to fulfilling the particular goals of project leaders and their donors than to fostering institutional integration.

**Other aspects.** The evaluators tried to find accurate budget costs for the education program, but it was not possible. We were told that there has never been a complete cost study of the postgraduate program. In addition, there is no system for modifying the price of the program (total costs + profit) to adjust for inflation or devaluation.

#### **Ald. Accounting System**

The evaluation team found that CATIE's accounting system meets the requirements for producing timely and accurate financial reports. However, the external auditor's report notes that accounting at CATIE follows guidelines from the Board of Directors and not generally accepted accounting principles. This method is not adequate for sound management and should be corrected as soon as possible.

The following specific observations are made concerning accounting matters.

**Fixed assets.** The way fixed assets are recorded by CATIE's accountants is unorthodox. Fixed asset value is not recorded until the end of the project (see Annex 1). We believe that assets (fixed and current) should be recorded the moment they are acquired,

purchased, or built, to comply with generally accepted accounting practices and AID regulations.

**Cash management.** During the project period (1985-1992) the end of year cash balance grew from \$507,000 to \$3,222,400 (see Annex 2). To us this reflects one of two things: a deficient planning process for the use of cash or a very conservative cash management policy. Excess cash should be invested in interest-bearing accounts or other monetary instruments. The handling of cash funds should be more carefully controlled, planned, and registered.

**Counterpart.** CATIE's method of estimating its contribution to a project counterpart does not consider ROCAP's opinion about the action. CATIE's accounting records do not provide sufficient information to support its contribution to the counterpart because CATIE officers feel they are not obliged to show the counterpart in their records. ROCAP and CATIE representatives should decide together whether they accept CATIE's position.

We believe ROCAP should accept in kind counterparts from CATIE expressed in physical units, such as use of existing infrastructure, contributions from other sources, and others, taking into consideration that CATIE does not produce profits or have surplus cash to supply as its counterpart.

**Member quotas.** In some cases, member quotas are in arrears for more than two years (see Annex 3). Officers at CATIE said it is very difficult to collect from member countries. This situation has considerably increased the accounts receivable and other accounts receivable totals (see Annex 2).

**Short-term liabilities.** Short-term liabilities have increased considerably during the life of the project, and the behavior of the reserves has been erratic. There should be a clear policy on management of these accounts.

**Accounting staff.** It is our opinion that the Accounting Department is still overstaffed, even after a reduction of five personnel. With SIIF in full operation, there should be higher productivity with fewer people. Further improvements in the accounting system and the use of SIIF could allow additional personnel to be removed from the accounting staff. The present distribution of responsibilities should be reorganized and clearly stated in writing, with each member having specific responsibilities for projects.

**Overhead cost allocation.** In its September 13, 1991, "Audit of the Overhead Rates of CATIE-ROCAP/Guatemala Projects" (Annex 4), Price Waterhouse recommended that CATIE use the multiple allocation method, with a direct cost (net of capital expenditures) distribution base. The audit estimated the overhead rate at 47.8 percent. Thus far, ROCAP has not accepted or rejected this suggested rate, and CATIE has not developed a proper methodology for determining its own overhead rates.

Following Price Waterhouse's guidelines, CATIE should design its own method for determining overhead rates and use the information in negotiating contracts with donors to obtain better conditions.

**Exchange rates.** Since the beginning of the project there has been a disagreement between CATIE and ROCAP about the exchange rates applied to currency conversion transactions. Both sides are responsible for the failure to resolve this issue. We do not see any difficulty in applying ROCAP's suggested method, despite CATIE's argument that it will be an "administrative complication" to use the actual exchange rate on the date of the transaction, versus CATIE's use of the previous month's average rate. ROCAP has not shown a true desire to clarify its position to CATIE about this point. There has been an exchange of letters, but after seven years the matter is still pending (see Annex 5).

**Differences from generally accepted accounting principles.**

- CATIE has no provision to cover losses from nonpayment of accounts receivable originating from agreements or contracts with donors, country members, commercial operations, or other risky endeavors.
- Costs of crops being processed are registered as expenses during the growing period. Income is recorded when the crops are sold.
- Depreciation on productive assets is not included in the financial statements.

Most of these practices were adopted by CATIE to fulfill budgetary requirements and other conditions imposed by donor institutions.

**Auditor's comment on Colon Fund.** According to the external auditor's report on the Colon Fund (Annex 6), dated September 28, 1992:

"In our opinion the fund accountability statement presents fairly, in all material aspects, the funds received and disbursements incurred in the execution of the Regional Project for Post Graduate Education and Training (Colon Fund) for the period from March 27, 1985, through June 30, 1992. The original Agreement budget is to be included as part of the above mentioned fund accountability statement. However, such budget is not included within that fund accountability statement because the original Agreement is unclear on how to modify budgeted amounts for an increase in expected earnings generated by the Special Fund AID-FEDECOOP-Corporacion de Financiamiento Industrial, S.A." (See table in Annex 6.)

**A1e. ROCAP/CATIE Pending Accounting Matters**

**Replacement of retirement funds.** Annex 7 shows a proposal submitted by the comptroller to replace retirement funds used to cover cash flow deficits during the past year. These amounts must be replaced because the retirement fund is an important liability for CATIE and its personnel.

## **A2. CATIE Institutional Policies and Practices Related to the Project**

### **A2a. Human Resources Recruitment, Retention, Compensation, and Professional Growth Practices**

Effective recruitment of professional staff and retention of the most competent personnel has been a priority throughout the project period. Relevant procedures have been codified in the Rules and Manual of Principal Professional Personnel, which covers the following:

- Definition and classification of personnel.
- Recruitment, selection, and appointment.
- Responsibilities, obligations, and privileges.
- Salaries and benefits.
- Changes in positions and functions.
- Annual vacations and leaves.
- Official travel.
- Termination of services.
- Disciplinary action and appeals.
- General dispositions.

The manual's recruitment chapter details selection procedures and criteria and says the Human Resources Unit has the responsibility to assure compliance and receive applications. The rules require ample dissemination of information on position openings. To evaluate applicants the director general names a personnel selection committee made up of a representative of the General Directorate, the immediate superior of person to be recruited, the chief of the Human Resources Unit, and two members of the principal staff. The director general or his/her designate sends the official employment offer to the person selected.

**Retention.** Maximum contract duration is for a two-year test period, and the appointment can be terminated at any time with 60 days notice.

**Compensation.** Salary and benefits are spelled out in detail in the manual. The important point here is that there is a defined system that provides for merit and longevity-related increases based on individual annual evaluations and recommendations of immediate superiors. Salary scales are adjusted by the director general in consultation with the Administrative Committee, and in accordance with budget approved by the Board of Directors.

**Professional growth practices.** The manual does not cover this subject. However, management, especially in the graduate school, is aware of the stimulus to professional staff that could be provided through such incentives. (See also Section III.B.)

## **A2b. Student Selection Criteria and Process**

Over the past decade CATIE has given considerable attention to its selection process to ensure that students are chosen on the basis of merit and that the program serves all of its member nations as well as other countries in the hemisphere.

In 1986—the year additional faculty became available through project funding—CATIE established an entrance examination for all applicants. The exam, which students take in their home countries, accounts for 40 percent of the entrance score. The other 60 percent depends on previous university grades, professional and scientific experience, commitment, and letters of recommendation. Beginning in 1993, CATIE plans to gradually increase the weight of the examination from 40 percent to 60 percent, and perhaps later to 80 percent, thereby placing more emphasis on the knowledge and intellectual skills measured by the test. The Center's staff believe the examination has increased the quality of incoming students. (See also Section IIIC1., Curriculum Development.)

## **A2c. Outreach and Communications Links to the Region and Beyond**

In compliance with its original charter, CATIE is regularly engaged in both formal and informal research and education networks. Prior to and during the life of the Regional Higher Education project, CATIE established working relationships with various International Agricultural Research Centers; U.S. and other foreign universities; international donors in Europe, Japan, Canada and the United States; Central American regional institutions; and international research and education networks. Section III.D on networking provides further details on these relationships and analyzes CATIE's work with REDCA and PASE under the Higher Education project.

## **A3. Financial Viability and Management of the Postgraduate Program**

### **A3a. Short-term Effects on Income and Expenditure Outlook**

The short-term effects of the project's final phase-out on the postgraduate budget have been handled in the following manner. As of January 1, 1993, the remaining nine positions are being absorbed into the core budget. These include the three administrative positions—director of the educational program, head of training, and head of postgraduate studies—and six teaching positions in the research departments and computer center. Earlier steps in the phase-out involved the research projects absorbing additional teaching responsibilities.

Funding for this final phase was raised internally by CATIE, mainly by tightening its administration under the new directorate mentioned earlier. A total of \$450,000 has been included in the 1993 budget to cover this transition to the core budget.

In addition, according to the director general, discussions are well advanced to obtain six additional positions that will include teaching responsibilities: two from ICRAF, two

from the Dutch government, and two from DANIDA. CATIE initiated the recruitment for these positions and the deadline for receiving applications was November 12, 1992.

### **A3b. Postgraduate Program Financial Controls and Auditing**

The comptroller's office of USAID/Guatemala submitted a document on August 31, 1992, stating that CATIE's internal control system should be improved to provide better financial management.

The response to this recommendation has been slow and is still incomplete. Remaining weaknesses in the internal control system include the following:

- The internal audit unit does not address in its work plan specific issues related to the project. Also, the internal auditor must be trained in USAID procedures and regulations (see Annex 8), have access to the external auditor's reports, and present annual reports to the Board of Directors and other reports as needed to committees or officers appointed by the Board.
- CATIE's filing system must be improved. The Center still classifies documents by type of expense, and does not separate them by source of funding. In addition, access to the files is not restricted to authorized personnel, making the system insecure.
- CATIE should codify in writing that the director general is the only officer authorized to contract loans for the organization.
- The budget should be used more effectively as a management tool. At present it is used for comparison of actual outlays with approved budget amounts, but not to control expenses. More planning and control are needed to avoid authorization of disbursements when there are no more funds available.
- Once the internal auditor completes his training in USAID audit procedures, he/she must prepare a detailed work plan for the final audit of the project.
- Following previous recommendations of the program review mission, there must be regular meetings between the external auditors and the Board of Directors to ensure that the Board can always obtain an independent appraisal of CATIE's financial situation. Management officers should not attend these meetings.
- The functions defined for the comptroller are not correct, by academic definition. He is currently acting more like a deputy director of administration and finance. There should be an assessment of this post and its responsibilities.

In addition to the above observations, the evaluation mission has the following observations on the determination of costs and cost controls for the postgraduate program:

**Workload distribution.** There is no information on the actual workload distribution of professors and researchers. Such a study would assess the cost of teaching for the educational program, and we strongly recommend it.

**Defined teaching responsibilities.** Faculty members should have clearly defined responsibilities to the postgraduate program. Project funds for teaching should be channeled through the postgraduate budget so that professors know they are attached to that program.

**Budget control.** The education program director should have greater control over budget, income, expenses, and cost allocation for his program.

**Faculty evaluation.** Modifications are needed in the present faculty evaluation system so that it not only determines whether a professor is effective, but provides a base from which to develop and implement incentives. Currently there is only an evaluation form filled out by students at the end of each course.

**Prices for training.** A mechanism is needed to determine prices for training sessions. Present prices are very low and probably do not even cover costs. As an example, another postgraduate school in Costa Rica charges more than \$150 per day to participate in a seminar, compared with the \$78 per day CATIE charges. Updating CATIE's rate would bring added income and help manage cash shortages.

### **A3c. CATIE's Long-term Financial Environment**

As shown in Annexes 9 and 10, CATIE's income and expense forecasts for 1992-1996 do not anticipate major difficulties financing the Center's cash flow. Nevertheless CATIE will need to make all possible efforts to secure more donors and other sources of funds to guarantee normal research and teaching activities.

The evaluation team believes a strong fundraising effort is needed and must be planned and implemented in order to collect enough financial resources to form an endowment fund that will secure CATIE's long-term financial standing.

In addition to enlarging the basic core budget, a long-term reliable source of funding is needed for scholarship and financial assistance for students, career development of the professional staff, and improvement of administrative and support services. To strengthen its efforts in seeking long-term support, CATIE should prepare specific medium- and long-term proposals describing in detail the activities proposed and their projected costs.

### **A3d. Long-term Financial Requirements for Physical Maintenance and Repair**

The evaluation team agrees with the main findings and recommendations of the Rex Dillow study, "Maintenance for CATIE."

## **Findings**

- The physical plant department is not exercising management responsibility for CATIE facilities.
- There has been no specific assignment of mission and functions and no allocation of funds to the physical plant for carrying out assigned functions, and therefore no accountability for budgeting and administering funds.
- Most buildings are poorly maintained and dirty. (On this point, the situation is much improved.)

## **Recommendations**

- Make evaluations of present facilities to determine specific maintenance needs, define clearly which facilities will be maintained, and allocate the required funds to the physical plant.
- Formulate annual maintenance programs including types of facilities, projects, and methods.
- Develop a routine inspection system to guarantee proper supervision of facilities and prompt action to solve problems.
- Give the physical plant department responsibility for custodial services for the buildings.
- Set up a preventive maintenance and repairs program. (Note: the 1993 budget for maintenance is \$212,920 according to Annex 11.)

In addition to Mr. Dillow's recommendations, we recommend that CATIE establish the head of maintenance and repair as a managerial position. The upkeep of physical installations should be upgraded, and preventive maintenance costs should be included in the 1993 budget.

We also recommend preparation of a long-term budget for maintenance and repairs that can be used by CATIE management in fundraising activities with donors.

### **A3e. Other Financial Management and Viability Issues**

**Postgraduate cost and pricing.** CATIE management must be able at any time to obtain the real costs of its postgraduate studies with a built-in price/cost mechanism. The evaluation team advised the postgraduate program's administrative officer on how to elaborate a more precise budget, and the outcome of this assistance is presented as Annexes 12 and 13. This preliminary study shows that the present tuition fee of \$5,000 per student

per year is insufficient. In order to cover costs only, tuition would have to be raised to \$6,267.

**Action on country quotas.** A closer and more active relationship with the country members of CATIE is needed, as is an effort to look for alternatives to the delay in quota payments. CATIE's General Director Dr. Ruben Guevara is trying to form a trust fund for each member country to guarantee the payment of quotas.

**Meaning of nonprofit.** Nonprofit organization means the organization should never give dividends to members or shareholders. It does not mean it should give away free or sell at cost its products and byproducts. We recommend that CATIE sell its products at a profit in order to capitalize the institution through an endowment fund or similar mechanism.

**Marketing unit.** CATIE should consider the feasibility of forming a marketing unit, not only for selling the physical products such as coffee, sugar cane, and milk, but equally to sell its academic and research products, technical assistance, and training. Such a unit might also assist fundraising activities.

**Filing system.** A better filing system is a must at CATIE. In our opinion there should be three main components: one for the education program, one for projects and products, and one for administration and finance, including accounting and internal audit files.

**Vehicle pool.** CATIE has too large a vehicle pool (about 170) of many different makes and styles (see Annex 14). These resources must be reoriented to minimize repair and upkeep costs. For example, prospective donors could be asked to supply CATIE with only one or two car makes chosen from those with available local maintenance and spare parts.

**ROCAP procedures for petition approval.** Any approval for the use of funds or changes between items in the budget or related issues must have the written approval of ROCAP to be valid. Oral approvals are not sufficient and have no legal weight.

## B. Staff Development in Postgraduate Programs

### B1. Program Stability and Continuity of Teaching Staff

According to the Project Paper, the most important component of the Regional Higher Education project was to be the strengthening of a permanent core of faculty at CATIE. Building on staff resources in 1985 of about 150 professionals (including 35 teachers), the project's CATIE component would provide greater stability and continuity of staff, improve the quality of instruction, and enhance the role of the graduate and professional training programs. Seventeen additional teachers would be provided, comprising 10 Ph.D. and 6 M.S. level faculty for CATIE's three teaching departments and one generalist for the computer center. CATIE was to begin to absorb the costs of some of these positions in year five of the project, thus spreading the recurrent costs over time.

Overall, these inputs were delivered largely as stated in the Project Paper, taking into account the 18-month project extension mentioned earlier. There is also broad agreement that this additional faculty provided a core of quality instruction that added stability and staff continuity during the project years.

Table III.B-1 below shows the composition of the teaching staff by sources of funding for the project period and two years prior. The average number of faculty from 1986-1991 was 47, and the main sources of funding were: core budget, 20 percent; Regional Higher Education project, 29 percent; and research projects, 47 percent.

Table III.B-1: CATIE Graduate Teaching Staff by Source of Funding, 1984-1992

SOURCE	1984	1985	1986	1987	1988	1989	1990	1991	1992
Projects	7	15	11	15	19	29	30	31	39
Core budget	7	17	11	10	7	14	8	9	6
RHE project	0	0	9	12	10	16	15	15	12
Other sources	4	3	2	5	1	0	2	2	4
Total	18	35	33	42	37	59	55	57	61

During the early stages of project phase-out, some of the research projects took on additional teaching responsibilities, thus helping to fill the gap in core funding. This action may have had a positive effect by linking postgraduate instruction and research. However, during early 1992 the still small number of positions funded by the core budget left the postgraduate program in a relatively unstable position and heavily dependent on variations in research project funding. Since then, the short-term effects of the phase-out have been addressed directly by CATIE's management as described above. A total of \$450,000 has been approved for nine positions in the 1993 core budget to cover this transition.

### **B1a. Staff Recruitment, Selection, and Retention**

For procurement of long- and short-term technical services, CATIE agreed to contract individually for each position. It was believed that some of the long-term Ph.D. and M.Sc. staff would have to be recruited from outside the Central America/Panama region because few individuals with sufficient expertise were available. To recruit for these staff positions and for projected short-term consulting services, CATIE was to create formal search committees that would announce the positions and carry out reviews to ensure that CATIE hired the most qualified individuals. These procedures were carried out in a satisfactory manner with good results overall.

Successful retention of staff during the project period was not a problem because of the care taken in recruiting and the long-term funding available. Nevertheless the overall turnover rate for faculty is fairly high: 4.5 years. In practice, this rate means some students have a change in thesis advisor midway and may have difficulty locating one with equal interest in their research projects. The high staff turnover can also affect the quality and consistency of course work.

The Board of Directors, the CATIE director, and the present director of the graduate school are aware of the staff turnover problem and are taking specific actions to eliminate it. These include plans to increase the core budget through the establishment of an endowment. For the short term, aggressive efforts are underway to reduce non-essential administrative and support staff and increase farm production for sale. At another level, staff turnover is being addressed by other proposed staff incentives, including those mentioned below.

### **B1b. Staff Professional Growth, Training, and Support**

Among the various measures being considered to foster continued professional growth of the teaching staff are:

- A mechanism for carrying out a Scientist Exchange Program.
- An initiative to encourage scientists in CATIE's fields of interest to devote a sabbatical year to teaching and research at CATIE.
- A Study Leave Program offering 3-6 months of study abroad to selected CATIE staff who have carried out distinguished work and could benefit from further specialized study.

These kinds of measures merit consideration and support as ways to build and maintain competence, and would provide stimulus for furthering creative work.

### **B1c. Subject Matter Relevance and Instruction Philosophy**

To assess the balance of subject matter expertise, the evaluators used as their basis CATIE's objectives and strategic plans as approved and modified by the Board of Directors.

At the time of project preparation, the accepted priority for both research and teaching was the need to increase agricultural productivity.

In deciding the funding for teaching staff under the project, this priority was translated into seven additional teaching positions in the animal production department, five in the plant production department, three in renewable natural resources, and one biometrician for the computer center. This balance, with ROCAP's concurrence, was modified somewhat during project implementation.

Near the end of the project in early 1992, the Board of Directors revised CATIE's priorities substantially, de-emphasizing teaching and research in animal production. However this action had only minor effects on what was the final phase-out stage of the project.

The relevance of curriculum content and compliance with CATIE's mandate is discussed in Section III C1b. below.

#### **B1d. Balance Between Teaching and Research Supervision**

A fundamental aspect of CATIE's approach to graduate instruction is the combination of intensive classroom teaching and supervised thesis research. On the staff side, the problem is always how best to combine the two in order to provide the most effective instruction efficiently.

On the administrative side this need typically requires collaborative efforts between a research department and the graduate teaching department. And it requires a special effort on the part of the teacher/researcher to balance his/her time between these responsibilities 50/50, 30/70, 70/30, or whatever may have been allocated.

In the past, when the primary commitment was to research on a specific project and teaching a course was an additional assignment, the latter frequently did not receive the time needed for adequate preparation of subject matter and teaching materials. There have been complaints by students about the absence of faculty at critical times both in courses and supervision of research, especially in cases where the staff member has to travel outside Costa Rica as part of his/her research work in the region.

In practice, thesis projects generally grow out of the long-term work plan of the research department in the student's specialty. Occasionally the department will provide supervision for other thesis projects, but this has not worked out well. The main reason is the heavy research, training, and teaching loads of the staff, which necessitate that a project that does not fit directly into the plan may not receive adequate attention. The normal procedure is for the student to select a thesis topic in consultation with his/her advisor, thus ensuring the subject is automatically made a priority area in the yearly work plan.

## **B2. Project Impact on Strengthening Departments' Teaching and Research Commitment**

As mentioned earlier, animal and plant production work has been combined into one sustainable agriculture department. There have been other recent changes, as shown in the organization chart on the following page. However, this section's discussion will use the department titles used in the Project Paper, which served as the project's structure for most of its life.

Ten of the 17 teaching positions were filled in late 1986, two more in 1987, and the remaining five by May 1988. Fourteen positions were filled by men and three by women.

### **B2a. Animal Production Department**

The seven additional staff positions provided to the animal production department were important in sustaining that program over the project period. At project initiation the department had only four core staff available for both training and research activities. The additional four Ph.D. and three M.S. staff were used to strengthen the work in animal nutrition, pastures and forages, genetics and animal breeding, and animal management and production.

The competency of the staff members hired for the above posts has not been questioned. However, because of changed priorities as a result of the 1990 external review and management decisions approved by the new Board of Directors, only one of the staff positions under the project will be continued under core budget. Two of the positions funded under the project will be discontinued and four are being taken on by other projects and will continue to contribute to the livestock components of the agroforestry systems work within the new sustainable agriculture department.

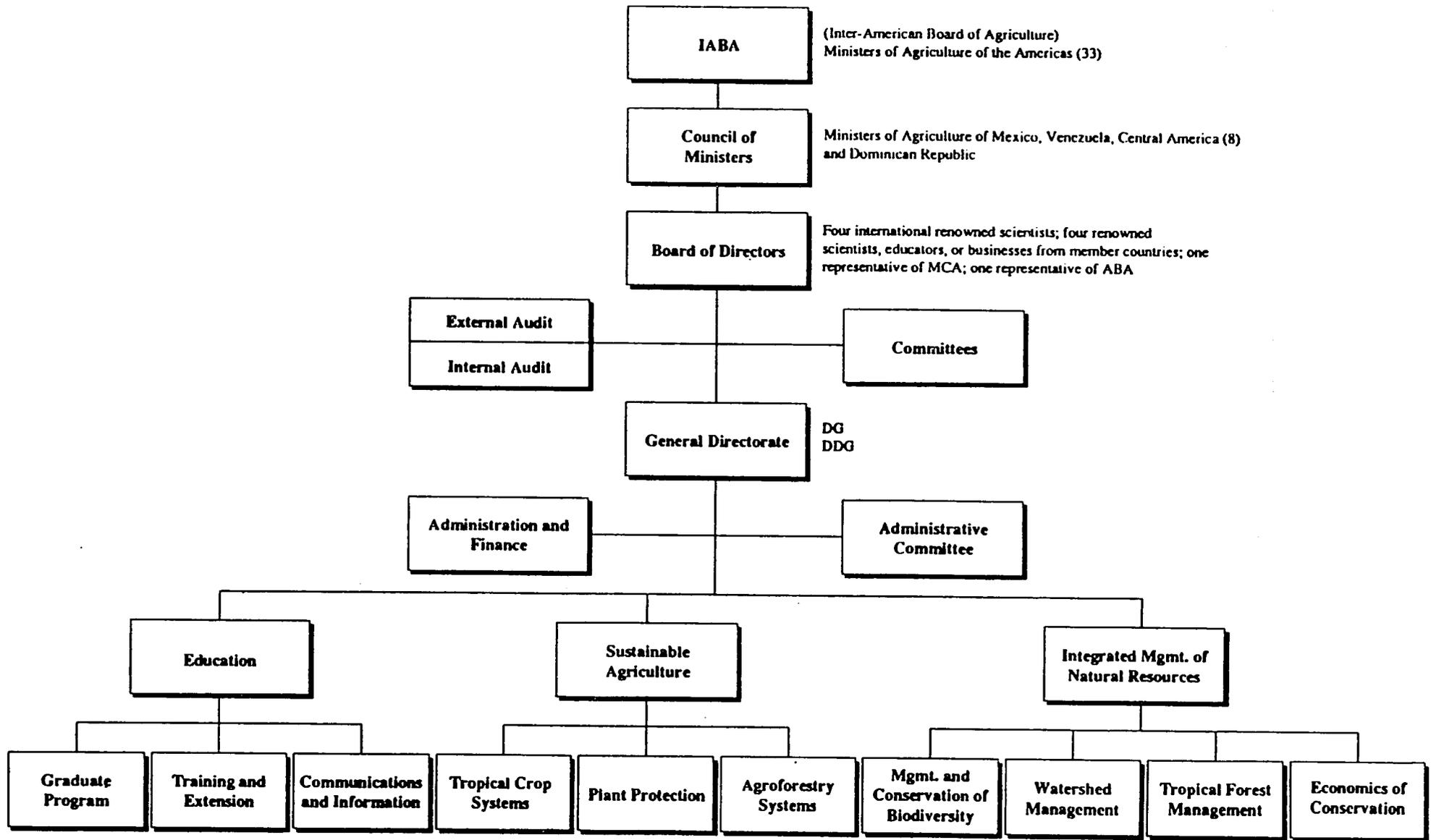
From the present perspective, it appears that the substantial project funding for staffing of animal production teaching and research should have been reviewed and partially reallocated prior to the 1990 external review.

### **B2b. Plant Production Department**

At the time of project approval, this department was expanding its work on production-oriented problems to complement its activities on farming systems methodologies. The proposed effort was to support three discipline areas: soils and plant nutrition, crop protection, and tropical crop production involving export and food crops and tropical fruits.

The plant production department had six core budget faculty, of which several were unable to teach because of full-time commitments to contracted research work. The five new positions (four Ph.D. and one M.S.) from the project provided additional teaching staff and made possible some reassignment of core faculty to teaching duties.

# CATIE Organization



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### **B2c. Renewable Natural Resources Department**

This department was also identified as a priority for staff support in the Project Paper, which pointed out that there were only five faculty on core budget and the department relied heavily on non-core staff to teach courses. Project funding was to have been provided for three additional positions. However, additional staff positions became available from the RENARM project, so only one of these positions was filled and the other two were eventually transferred to other departments being strengthened.

The natural forest management specialist position was filled by hiring an experienced forester who was retained under RENARM after completion of RHE project funding for his position.

### **B2d. Computer Center**

In addition to the main teaching department positions, one biometrician (Ph.D.) was provided to the computer center and assigned to teach core courses applicable to the needs of all departments. The biometrician hired in September 1986 has recently been named director of the Information Unit, which includes the computer center. He will be transferred to the core budget on January 1 when project funding for the present position ends.

The computer center is moving ahead with a wide range of activities, including graduate instruction in statistics, experimental design, and sampling, as well as training courses for CATIE personnel and graduate students in use of equipment and software. The center provides many services to the postgraduate college, research staff, and central administration, and is also focusing on greater use of microprocessors and practical linkage possibilities.

Policies, services, courses, and prices are being defined in consultation with users. Issues under discussion include recuperation of costs for teaching and training activities, and hardware, software, and database policies.

### **B3. Overall Technical Staff Involvement in Education**

The majority of the principal technical staff of CATIE are now involved in educational activities—teaching postgraduate courses, training students and staff, and/or acting as thesis advisors.

Table III.B-2 on the following page shows by name all CATIE staff who were involved in teaching and/or thesis supervision at the time of the evaluation team's visit. This list includes 42 of the 52 principal technical staff, 11 of the 29 associate principal staff, and 15 of the 99 support staff, for a total of 68 personnel, or 38 percent of all technical staff. The table also includes three principal and two support staff located in Nicaragua, Honduras, and Guatemala who are on thesis advisory committees.

NOMBRE DEL CURSO	PROFESORES/	COSTO SEMESTRAL	COSTO	DESEMPEÑO	
			TRIMESTRE	POSGRADO 25%	
M-201	ECOLOGIA FISICA	DONALD KASS	4081	12243	3060.75
M-202	ECONOMIA DE LA PRODUCCION I	ORAMIREZ/CREICHE/	4290	12870	3217.5
M-301	BASES ECOLOG. PARA PRODUC. SOSTENIBLE I	V. CARTIN	500	1500	1500
M-400	USO DE BIBLIOTECA Y LIT. CIENTIFICA I	LAURA COTO	1500	4500	1125
M-401	INGLES I	HARLAN SMITH	500	1500	1500
M-402	ESTADISTICA I	G. PIAGGIO/P. FERREIRA	4291	12873	3218.25
M-403	PROCESAMIENTO DE DATOS PARA LA INVEST.	GUSTAVO LOPEZ	1092	3276	819
M-120	MANEJO INTEGRADO DE PLAGAS I	O. RAMIREZ	4290	12870	3217.5
M-121	ECOLOGIA DE INSECTOS	L. HILJE	3429	10287	2571.75
M-122	RECURSOS FITOGENETICOS	J. MORERA	3828	11484	2871
M-203	SUELOS TROPICALES	D. KASS	4081	12243	3060.75
M-205	AGROECOSISTEMAS	J. ARZE	4682	14046	3511.5
M-211	BASES ECOLOGICAS PARA SILVICULTURA	B. FINEGAN	3010	9030	2257.5
M-213	DENDROLOGIA	L. POVEDA	500	1500	1500
M-230	MEJORAMIENTO ANIMAL	A. TENOLDE	4561	13683	3420.75
M-231	FISIOPATOLOGIA ANIMAL	G. MORALES/FCO. ROMERO	4040	12120	3030
M-305	ECONOMIA DE LOS RECURSOS NATURALES	C. REICHE/T. AMMOUR	3870	11610	2902.5
M-311	HIDROLOGIA E HIDRAULICA	H. SOLIS	3530	10590	2647.5
M-404	DISENO EXPERIMENTAL I	P. FERREIRA/G. PIAGGIO	4291	12873	3218.25
M-420	REDACCION TECNICA	E. HIDALGO	1267	3801	950.25
M-104	FITOMEJORAMIENTO	J. MORERA	3828	11484	2871
M-105	MANEJO ENFERMEDADES EN CULT. TROP.	J. J. GALINDO	3967	11901	2975.25
M-125	PLAGUICIDAS	B. VALVERDE	3319	9957	2489.25
M-124	MALEZAS	R. DELA CRUZ	4550	13650	3412.5
M-125	DIAGNOSTICO EN M.I.P. I	E. BUSTAMANTE	4419	13257	3314.25
M-206	INTROD. A LA DINAMICA DE SIST. AGRICOLAS	J. ARZE	4682	14046	3511.5
M-214	SILVICULTURA TROPICAL	I. HUTCHINSON/C. SABOGAL	4288	12864	3216
M-215	SEMILLAS FORESTALES	R. SALAZAR	4513	13539	3384.75
M-216	MERCADEO DE PRODUCTOS FORESTALES.	H. VON PLATEN/I. HERNAND	3010	9030	2257.5
M-217	SISTEMAS AGROFORESTALES I	E. VIQUEZ	1882	5646	1411.5
M-232	MANEJO DE PASTOS Y FORRAJES	D. PEZO	4126	12378	3094.5
M-233	NUT. Y ALIMENTACION DE RUMIANTES	M. KASS/ F. ROMERO	2127	6381	1595.25
M-235	GENETICA DE POBLACIONES	A. TEWOLDE	4561	13683	3420.75
M-306	BIOLOGIA DE LA CONSERVACION	J.M. MORA	500	1500	1500
M-312	CONSERVACION DE SUELOS	J. FAUSTINO	3776	11328	2832
M-313	SISTEMAS DE MANEJO DE INFORMACION	JSABORIO/LUGALDE	3571	10713	2678.25
M-308	PLANIFICACION DE AREAS PROTEGIDAS	DMASTERON/JLVILLA	3492	10476	2619
M-405	AGROMETEOROLOGIA (TUTORIA)	FCO. JIMENEZ/BRAPIDELL	3010	9030	2257.5
M-406	TECNICAS DE MUESTREO	P. FERREIRA/G. PIAGGIO	4420	13260	3315
M-407	ANATOMIA VEGETAL	N. VASQUEZ	1433	4299	1074.75
M-410	DESARROLLO RURAL I	F. FERRAN	3956	11868	2967
M-127	MANEJO INTEGRADO DE PLAGAS II	O. RAMIREZ	4290	12870	3217.5
M-128	DIAGNOSTICO EN M.I.P. II	E. BUSTAMANTE	4419	13257	3314.25
M-129	FITOMENATOLOGIA	N. HARBAN	4382	13146	3286.5
M-130	MICOLOGIA/BACTERIOLOGIA	E. BUSTAMANTE	4419	13257	3314.25
M-131	CONTROL BIOLOGICO	T. ZOEDISCH	3723	11169	2792.25
M-106	CULTIVO DE TEJIDOS	AABDELMOUR/JESCALANT/M	3010	9030	2257.5
M-107	FITOMEJORAMIENTO AVANZADO (TUTORIAL)	J. MORERA	3828	11484	2871
M-207	MANEJO SUELOS DEL TROPICO	D. KASS	4081	12243	3060.75
M-218	MEJORAMIENTO GENETICO FORESTAL	FHESEN/ECOREA/JCORNELI	3010	9030	2257.5
M-219	SISTEMAS AGROFORESTALES II	FHOLLHANN/IHERNANDEZ/	2555	7665	1916.25
M-221	MANEJO FORESTAL	C. SABOGAL	4054	12162	3040.5
M-222	SILVICULTURA DE PLANTACIONES	W. VASQUEZ/L. UGALDE/G.	3571	10713	2678.25
M-234	SISTEMAS DE PRODUCCION CAPRINA	J. BENAVIDES	3062	9186	2296.5
M-236	GENETICA CUANTITATIVA	A. TENOLDE	4561	13683	3420.75
M-237	FISIOLOGIA Y PATOLOG. REPROD. LACTANCIA	JR. MOLINA	500	1500	1500
M-238	TEC. DE LABORATORIO EN NUT. ANIMAL	M. KASS	2127	6381	1595.25
M-239	METODOLOGIA DE INVEST. PAST. Y NUT.	D. PEZO/ FCO. ROMERO	4126	12378	3094.5
M-309	ECOLOGIA DE MANGLARES	J. POLANTA	2762	8286	2071.5
M-310	MANEJO AREAS PROTEGIDAS	M. CIFUENTES	3010	9030	2257.5
M-315	MANEJO DE CUENCAS HIDROGRAFICAS	C.J. RIVAS	4243	12729	3182.25
M-316	PLANIFICACION Y USO DE LA TIERRA	P. SHARMA	4587	13761	3440.25
M-440	SEMINARIO DE TESIS (OBLIGATORIA)	J. RAMIREZ	2486	7459	1864.5

## **C. Human Resources Development**

This activity was included in the project to assist CATIE's new graduate studies and training department carry out the curriculum development of the teaching program. The project provided technical assistance starting in year four and involving four professionals for three months each: a team leader and specialists in vegetable production, animal production, and natural resources.

### **C1. Curriculum Development and Implementation**

#### **C1a. Progress in Curriculum Development**

The evaluation team was charged with reviewing the current status of CATIE's curriculum and recommending changes as appropriate.

##### **C1a(1). Background**

The graduate program in agricultural sciences and renewable natural resources began in 1942 when the InterAmerican Institute of Agricultural Sciences (IICA) was founded. In subsequent years, the program's evolution followed that of IICA. In the agreement signed in 1973 between IICA and the Government of Costa Rica to create CATIE, the University of Costa Rica (UCR) committed itself to share responsibility for a postgraduate program that defined academic, operational, and financial responsibilities and privileges for each organization. This agreement between CATIE and UCR expired in 1983, leaving many problems unsolved.

The curriculum at CATIE had been highly variable depending on what staff were present. In the past, most professionals were hired as specialists and were frequently tied to a particular project and donor. Once at CATIE, they were asked to teach a course in their area of specialty. These researchers frequently did not feel obligated by contract to teach, but when they did agree to do it, they were allowed to state their teaching preferences without being tied to a well defined curriculum.

This informal process caused many problems. Over previous years, about 60 different subject areas were taught or researched for masters' theses, while the number of courses was only about twenty. Those courses taught tended to reproduce information on traditional disciplinary fields, but CATIE lacked sufficient specialists to strengthen any particular area. A more interdisciplinary, environmentally sound, and production-oriented approach was required, but developing such an approach would be difficult. There were no student entrance or exit profiles, no objective selection process, and a shortage of analytic content in the courses. Overall, there was no clearly stated conceptual framework for education and training activities. In addition, the lack of a time schedule resulted in some students spending up to 50 months to graduate.

The Regional Higher Education project helped CATIE overcome some of these difficulties, but others are still pending.

### **C1a(2). Outcomes**

The systematic curriculum development process applied with project support has provided CATIE with a solid base for its postgraduate studies and training activities. There are currently 65 courses integrated into six master's curriculum plans.

Review of a random sample of 18 of these courses led the evaluation team to conclude that the instructional development process has produced satisfactory results. Courses have well defined analytic content, though there is still room to reduce ambiguity, particularly in the formulation of instructional objectives. This requirement is understandable, given that it is a new procedure for most faculty members whose background in agricultural research included little instructional system design and development.

About 60 percent of the faculty have participated in curriculum training through six different short courses presented by Latin American consultants and education specialists from Iowa State University. CATIE now has documents available covering conceptual framework, principles, structure, planning, entrance requisites, exit profiles, and content maps to orient curriculum development. There are also statements on the values, attitudes, and individual and social skills that should characterize CATIE's alumni.

The faculty interviewed by the evaluators are aware that curriculum development has been a beneficial activity for CATIE's postgraduate and training programs. Today, staff is hired with clearly defined responsibilities for education and research. CATIE's graduate program has master's degree training for the Latin American and Caribbean regions in the following areas:

- Tropical livestock
- Silviculture and agroforestry
- Tropical crops, including crop improvement protection
- Watersheds
- Protected wildland areas
- Tropical forests

The content of education at CATIE is oriented toward improving research skills, knowledge acquisition, and responses to regional country demands. With regard to teaching, the method seems to be more inductive than deductive, which is appropriate considering that students at CATIE are adults and experienced professionals.

The curriculum is divided into eight terms of three months each. The first four terms are devoted to courses taken during the first year of the program, so students will normally take three or four courses each quarter. The second year's four terms are devoted to the research thesis. To complete M.Sc. studies, each candidate is required to have a minimum of 40 course credits and 30-32 research credits. A qualifying examination, a thesis, and a minimum grade of 70 percent are also required.

The first year's work is composed of general courses (mandatory for all students), basic courses (specific according to the particular M.Sc. curriculum), and electives chosen by each student and requiring the approval of his/her major professor. Out of the total 65 courses, six are required and account for 13 of the needed 40 credits. Additionally, all students have to present two seminars: one on their thesis proposal (one credit) and one on research results (no credits).

Students are chosen based on their qualifications. In 1986 CATIE established an entrance examination that accounts for 40 percent of the overall entrance score; the remaining 60 percent is based on other factors including previous university grades, professional and science experience, commitment, and letters of recommendation. It is generally believed that the examination increased the quality of entering students. For 1993 there is a plan to gradually increase the exam's weight, first to 60 percent and later to 80 percent. The initiation of the exam plus the involvement of REDCA in some countries has strengthened these countries' participation in CATIE's programs. Some countries have even developed a system to help students prepare for the entrance test.

All students can propose working on a topic that can be researched in their home country. When this is possible, a local advisor and major professor supervise the work. Such programs benefit all parties concerned, including the country involved. All thesis research must be approved by the student and technical academic committees. The research advisors and the teachers are themselves participants in CATIE's research programs.

Learning evaluations for students are based on written exams, term papers, laboratory reports, seminar presentation grades, and the thesis. Thesis research work consists of a project proposal and defense, the actual written document, and a final exam on the selected topic.

In general, the research and education components of CATIE interact well. The graduate topics are based on the research program areas, and the faculty in most cases are involved in both research and teaching programs. Teacher evaluations are performed by students, who use predesigned forms.

The time schedule for graduation is being reduced and is now nearing the initial 24-month definition. In all cases, scholarships are not extended beyond 24 months. In addition, a proposal to establish norms and procedures for a system of research assistantships for all students is being developed.

### **C1a(3). Comments**

There is still no performance-based written statement on the exit profile. What is available is purely content-based. The evaluators recommend the development of a performance-based profile. For example, the head of postgraduate studies has pointed out several key traits which characterize CATIE alumni once they re-enter their institutions:

- They exhibit a consciousness about harmonizing production and conserving natural resources.
- They look for sound approaches to tropical forest issues and generally consider agroecological factors underlying production.
- They use global, systemic thinking.

These characteristics are largely the result of the direct contact with nature on CATIE's campus and close interaction with professors, other students, and the many outstanding visitors. Through their close interaction with the natural environment, both staff and students undergo a process of personal and professional development during their stay at CATIE. Moreover, the role of CATIE's faculty goes far beyond class sessions, laboratory practices, and field projects. This being the case, curriculum development in future years should maintain an emphasis on the desired exit profile and on CATIE's learning environment.

Staff interviewed agreed that CATIE's alumni do not usually have strong educational backgrounds in management, marketing, and policy and decision making processes. Nonetheless, these characteristics are being emphasized by regional country governments and private sectors.

Educational and training materials at CATIE are based on teachers' notes, research papers selected by the faculty, and excerpts from textbooks. In general, there are no well developed training packages with a systematic educational design and product presentation, with the exception of CATIE's noteworthy advances in expert systems. Under this situation, the evaluation team questions the low priority given the media production and auditorium facilities, which have still yet to be built.

Overall, the field of communication has developed slowly at CATIE compared to advances at the international level. During the past 40 years, communication has emerged as a dynamic area with solid foundations in both academia and practice. At present, communication science and technology integrates human behavioral knowledge from traditional disciplines like anthropology, sociology, psychology, education, economics, linguistics, system thinking, and philosophy. This field has been further reinforced by advances in the electronic technology of media production, telephones, and computers.

Courses on scientific communication were very valuable to CATIE in previous decades. Many professionals learned at Turrialba how to write scientific papers, how to formally interact with each other within research communities, and how to make the most of library and documentation resources.

For CATIE, communication is highly relevant in several respects, including technology transfer, community participation, organizational development, distance education, image building, and marketing. Yet, in the 1993 catalog now being prepared,

there is not a single course in communication. Even use of library and documentation resources is missing from the present curriculum.

### **C1b. Relevance of Curriculum to CATIE's Mandate**

It was expected by the evaluation teams that the new curriculum would be relevant to the Center's mandate, which emphasizes research and education activities on sustainable agriculture and conservation of natural resources in the lowland tropics. It was also expected that CATIE's long-range planning would include ample coordination and consistency with the human resources needs of the Central America and Panama region, as identified by the respective governments.

#### **C1b(1). Outcome**

The same sample of courses examined for curriculum development was checked for relevance to CATIE's mandate. Faculty and students were interviewed and long-term documents reviewed. From the information acquired there is no concern about a lack of relevance. All of the analytical course contents examined deal with sustainable agriculture and environmental issues, and students interviewed expressed satisfaction in this regard.

Through REDCA, CATIE has established a direct and continuing needs assessment process by government officials and other participants in the network. This process seeks to ensure relevance for all of the Center's programs and endeavors. Needs and opportunities are taken into account, from short-term activities to long-term plans.

A strategic 10-year plan adopted in 1988 intends to meet this challenge by implementing interdisciplinary programs that integrate elements of production with those of natural resources. This integration is conceptualized at different levels including commodity components, agroecological zones, individual and social human behavior, and government policy making.

The 1990 program review team, after an analysis similar to that of the current evaluation team, stated that CATIE holds a comparative advantage in the following areas:

- Tropical crops improvement
- Integrated pest management
- Management of natural resources
- Integrated systems management of agriculture, livestock, trees, and pastures
- Ruminant feeding systems
- Land system analysis and management

#### **C1b(2). Comments**

One weak link in CATIE's education and training system is the lack of a strong human behavioral sciences component. Particularly weak are managerial skills relative to private entrepreneurship. Environmental changes, for example in watershed management,

call for in-depth skills and understanding of community participation, a topic which should be reinforced in future curriculum improvement. It is hard to expect that effective resources management can be achieved using only conventional dissemination of innovative methods.

### **C1c. Formal Instruction in the Use of Laboratories, Shops, Library, Computers, and the Experimental Farm**

Formal instruction at CATIE is supposed to be used to help upgrade laboratories, libraries, shops, and computer and experimental farm services in support of education and training.

#### **C1c(1). Background**

At project start-up, CATIE's laboratories and shops were working with old equipment, and the computer center lacked sufficient and appropriate space to support educational and training activities effectively. With regard to the library, the Project Paper had identified a dearth of periodicals relevant to the teaching programs. Only the experimental fields and farm services were considered adequate for educational and research purposes, except for the need for additional buildings at La Lola farm.

#### **C1c(2). Outcome**

In addition to the expanded living quarters for students and more classroom space and teaching equipment provided as a result of the project, the graduate school has upgraded its laboratories and library collections. A well-established computer center is serving faculty, students, and researchers, and additional facilities were built at La Lola farm.

#### **C1c(3). Comments**

Two of these improvements have thus far received little use: the physiology laboratory and the new buildings at La Lola farm.

### **C2. Human Resources**

The project's goals included 200 M.Sc. degrees awarded and 3,500 persons trained through short courses, in-service training, and technical meetings. In addition, the student body was to be predominantly from the Central America and Panama region, though also including students from other CATIE member countries such as the Dominican Republic.

#### **C2a. Background**

The failure to establish a suitable professional human resources base to work in agriculture was noted in the Project Paper as a component of the agricultural crisis in CA/P countries. This need was made more pressing because no country was self-sufficient in basic food crops, income from principal export crops was decreasing, and yields were low.

The RHE Project Paper emphasized that the key to increasing the output of technology lay in making quantum improvements in the human resources base's ability to generate, adapt, disseminate, and apply that technology. The same document points out that demand for well trained, production-oriented agriculturalists can only increase over time as productivity gains become more important. The supply and demand of qualified human resources is a highly relevant issue for any country, particularly in the CA/P region. The goal of education at CATIE is to produce quality professionals who can provide the leadership and skills to address important agricultural and natural resources problems in the region.

### **C2b. Outcome in Terms of M.Sc. Graduates**

To illustrate project output in human resources, Table III.C-1 and Figure III.C-1 on pages 27 and 28 compare the performances of the three administrators of the graduate school: IICA, UCR-CATIE, and CATIE.

During IICA's administration, the program built momentum and reached its peak with 52 graduates in 1970. From that time the number of graduates declined, including during the first years of UCR-CATIE administration, until 1978 when only 11 students graduated. During the remainder of UCR-CATIE's management the number of graduates grew somewhat to 28 per year in 1981 and 1982 and then declined again to 21 in 1985; the year before CATIE took over full responsibility. Strengthened by the RHE project and CATIE's direct administration, the graduate program reached a peak in 1989 of 58 students and from 1986-1992, 314 students received M.Sc. degrees at CATIE—57 percent above the target of 200 stated in the project amendment of 1991.

### **C2c. Accomplishments of Non-degree Training Programs**

Since its beginning, CATIE's continuing education program, which includes courses, in-service training, and technical meetings, has expanded steadily (see Table III.C-2 and Figure III.C-2 on pages 29 and 30). For the first 35 years—covering the period during which it was administered by IICA and half of the UCR-CATIE administration—1,735 persons received training. From 1981-1984 this number more than doubled to 4,301 persons trained—an increase attributable almost entirely to the Kellogg project.

The total more than doubled again during the RHE project, with 6,335 professionals trained, (81 percent above the target of 3,500) for a cumulative total of 10,636 in 1992. Currently, 45 percent of the training is done at CATIE and the remaining 55 percent carried out in country.

Based on the graduate studies curricula, and complemented by hired outside experts, training opportunities at CATIE are increasing and are now being classified into three categories: strategic, innovative, and conjunctural.

Table III.C-1: CATIE Graduates, 1947-1992

Year	No. of Students	Cumul. Students	Year	No. of Students	Cumul. Students	Year	No. of Students	Cumul. Students	Year	No. of Students	Cumul. Students
1947	1	1	1959	8	92	1971	40	449	1983	24	753
48	4	5	60	11	103	72	49	498	84	23	776
49	7	12	61	23	126	73	36	534	85	21	797
50	6	18	62	24	150	74	30	564	86	28	825
51	4	22	63	25	175	75	22	586	87	32	857
52	3	25	64	9	184	76	18	604	88	46	903
53	6	31	65	21	205	77	18	622	89	58	961
54	17	48	66	24	229	78	11	633	90	56	1,017
55	8	56	67	46	275	79	21	654	91	49	1,066
56	9	65	68	39	314	80	19	673	92	52	1,118
57	6	71	69	43	357	81	28	701			
58	13	84	70	52	409	82	28	729			

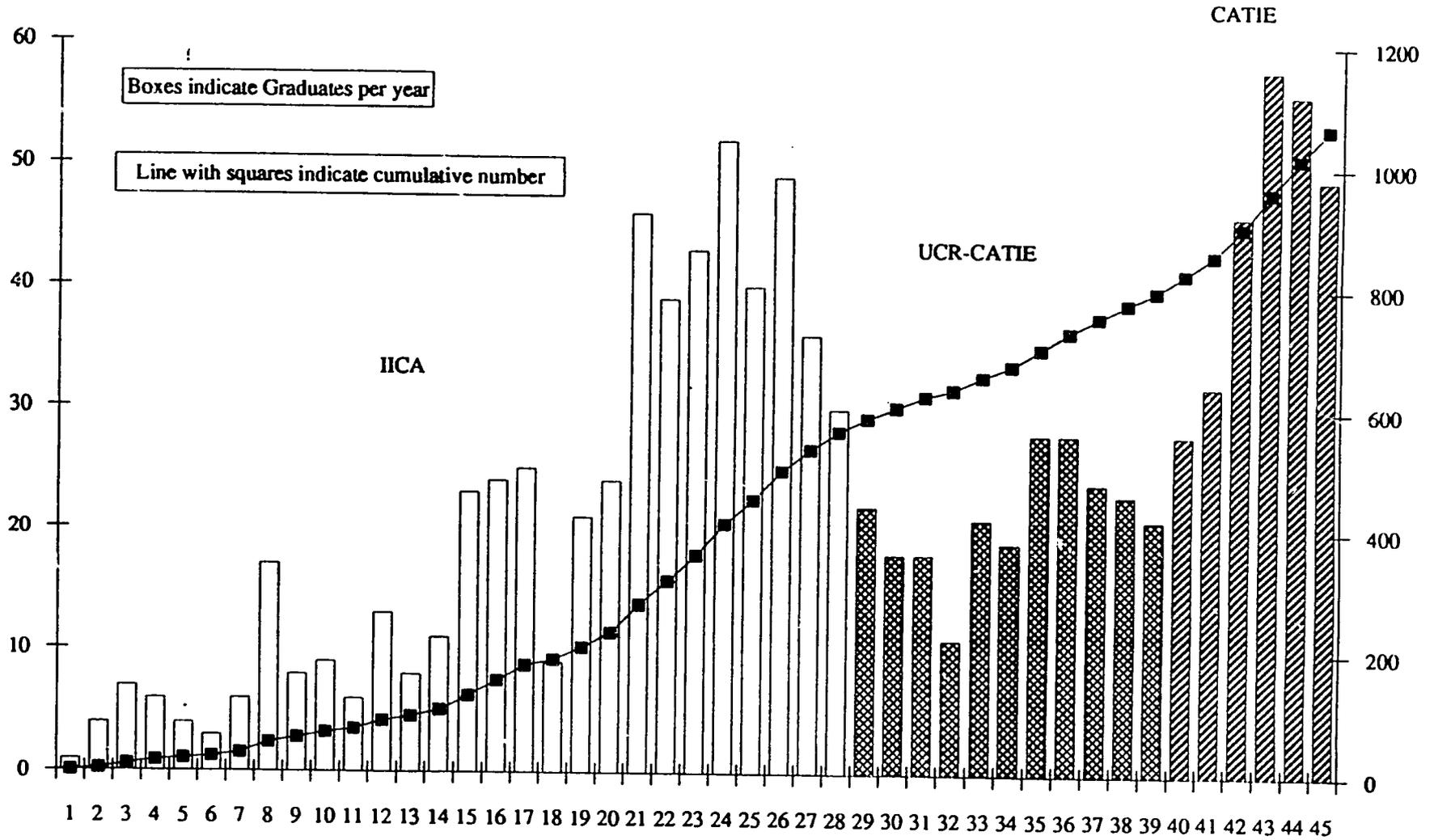
**Graduate School Administrations**

IICA: 1947-1974  
 UCR-CATIE: 1975-1985  
 CATIE: 1986-1992

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Figure III.C-1: CATIE Graduates, 1947-1992



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Table III.C-2: Professionals Trained at CATIE, 1946-1992

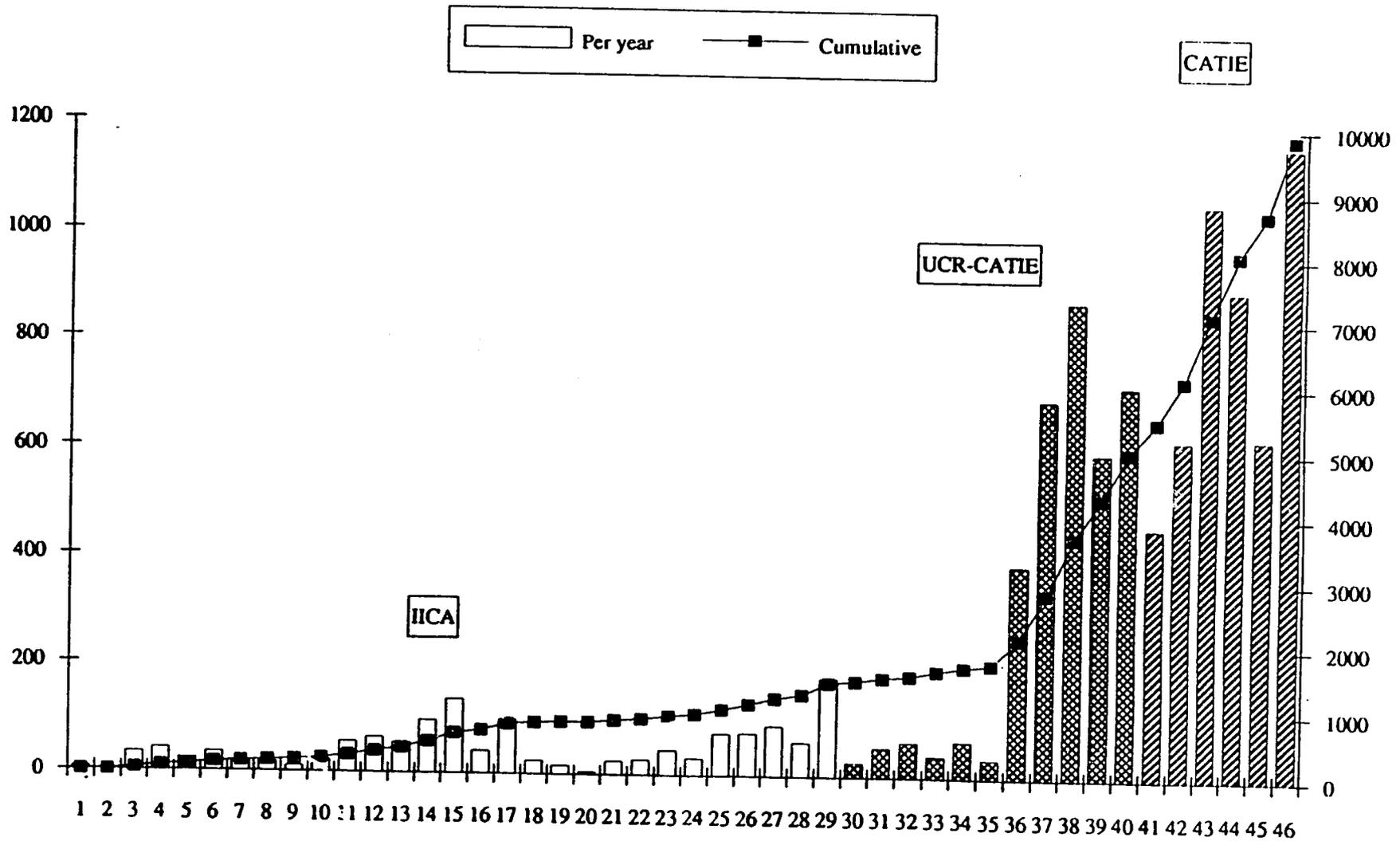
Year	No. of Prof'ls	Cumul. Prof'ls	Year	No. of Prof'ls	Cumul. Prof'ls	Year	No. of Prof'ls	Cumul. Prof'ls	Year	No. of Prof'ls	Cumul. Prof'ls
1946	6	6	1958	56	390	1970	78	1,022	1982	696	2,823
47	2	8	59	97	487	71	79	1,101	83	878	3,701
48	34	42	60	136	623	72	93	1,194	84	600	4,301
49	42	84	61	42	665	73	63	1,257	85	722	5,023
50	24	108	62	100	765	74	181	1,438	86	463	5,486
51	35	143	63	25	790	75	28	1,466	87	625	6,111
52	17	160	64	16	806	76	56	1,522	88	1,061	7,112
53	18	178	65	5	811	77	66	1,558	89	900	8,072
54	11	189	66	26	837	78	42	1,630	90	628	8,700
55	23	212	67	29	866	79	69	1,699	91	1,169	9,869
56	57	269	68	46	912	80	36	1,735	92	767	10,636
57	65	334	69	32	944	81	392	2,127			

**Training Program Administrations**

IICA: 1946-1974  
 UCR-CATIE: 1975-1985  
 CATIE: 1986-1992

Figure III.C-2: Professionals Trained at CATIE, 1946-1992

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The following relevant topics have been covered in CATIE's training sessions:

- genetic engineering
- tissue culture
- promising crops
- plant pathology
- plant protection
- forest management
- project formulation
- project management
- project evaluation
- agroforestry systems
- strategic planning of human resources
- agrometeorology
- protected areas management
- communication and extension
- animal and plant genetics
- animal health
- animal nutrition
- animal production
- training of instructors
- administration of training activities
- watershed management development

#### **C2d. Participation of CA/P Countries**

To illustrate the accomplishments of the project in terms of participation of CA/P countries, pie charts are presented that correspond to each of the graduate program's three administrative periods. As Figure III.C-3 on the following page shows, IICA's administration was characterized by predominant participation of students from Latin American countries besides Central America and Panama; the CA/P region accounted for only 17 percent.

During UCR-CATIE's administration, the proportion of students from CA/P increased significantly, reaching 51 percent. High participation from Costa Rican enrollees characterized this decade. During the first 28 years of the graduate program, Costa Rica had 29 graduates, with an average of about one M.Sc. per year. In the UCR-CATIE phase, this number increased to 84—an average of about 7 graduates per year.

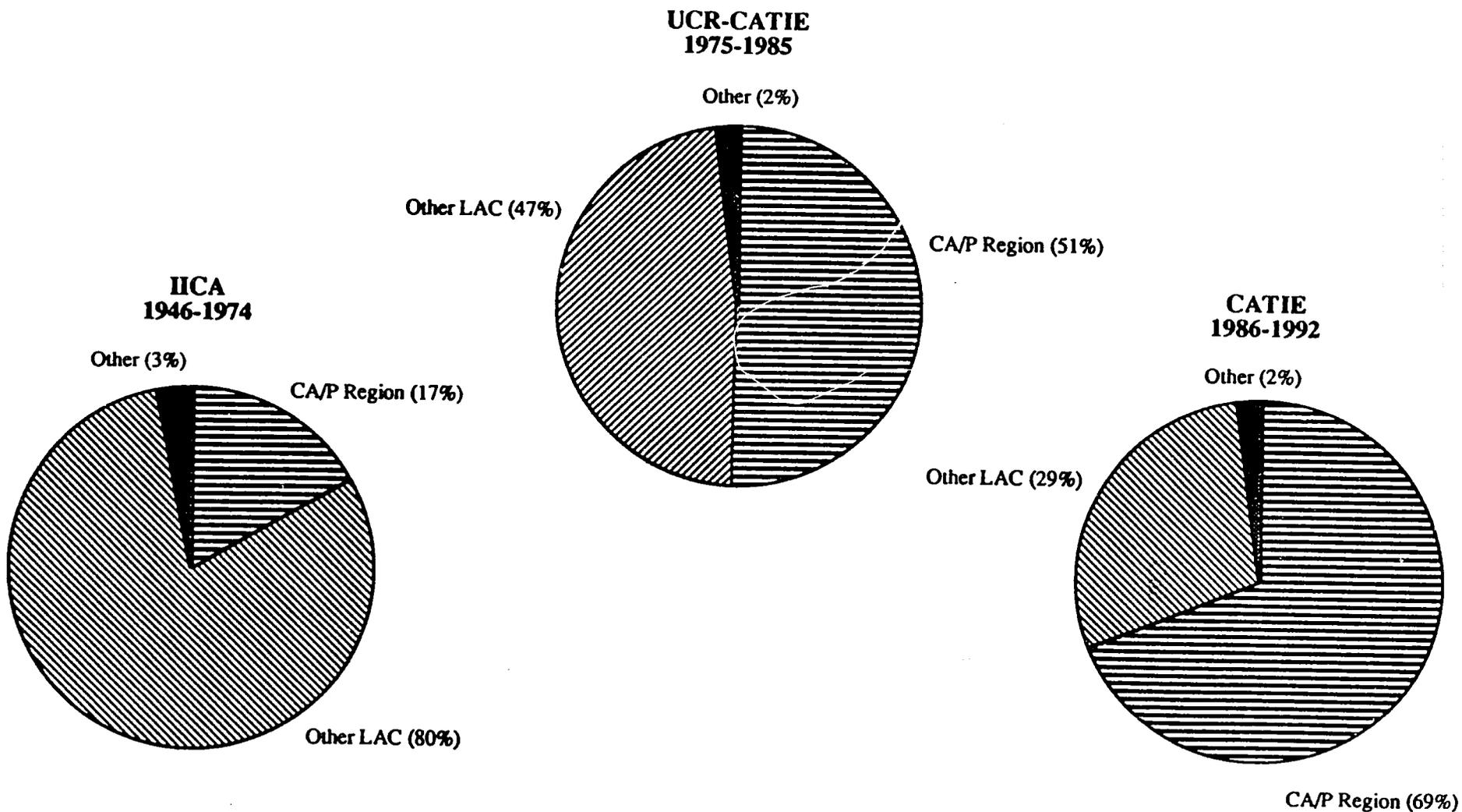
The participation of CA/P was definitely strengthened by the project during CATIE's administration. Close to 70 percent of the current students are from CATIE member countries.

Other Latin American and Caribbean countries (mainly Brazil, Colombia, Peru, and Ecuador) reduced their participation from almost 80 percent during IICA's administration to about 25 percent at present. Since 1977, CATIE has graduated more than 1,000 master's degree students. (Table III.C-1 and Figure III.C-1).

#### **C2e. Comments**

Project accomplishments in building human resources for the region have exceeded expectations. Postgraduate education and training at CATIE have provided many professionals with an opportunity to improve their knowledge and skills.

**Figure III.C-3: Geographical Distribution of CATIE Graduate Students**



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Documents from previous evaluations and this team's observations of networking activities suggest that CATIE's graduate studies and training programs are very well received by other countries as a meaningful input into building and updating the professional human resources base for the region.

### **C3. CATIE Development Office and Alumni Affairs Programs**

#### **C3a. Development Office**

The evaluation team expected to find suitable offices built or renovated and a development office established; a long-term development program carrying out major gifts and special consultation programs; and corporate relations activities to enhance CATIE's financial self-sufficiency.

The expected strategy for the development office was not to ask for charity, but rather to emphasize marketing directly to governments, foundations, international organizations, and alumni. It was expected that CATIE's development activities would be a management responsibility.

##### **C3a(1). Background**

As part of the project preparation, technical assistance provided to assess CATIE's institutional development needs resulted in the design of a three-year development program that is fully detailed in Annex II.A.4 of the Project Paper. The program covered staffing, consulting services, travel, promotional advertising, and operations expenses for the development office.

The purpose of the program was to help CATIE achieve longer-term self-sufficiency and increase outreach to alumni. It was anticipated that the development office activities would include corporate, international organization, and foundation relations; major gifts; development publications and promotions; and special consultation programs—all generating an estimated \$3 million dollars over the six-year life of the project. These resources were expected to be used to cover recurrent costs, including development office activities.

##### **C3a(2). Outcome**

Renovation of suitable offices for development was carried out, and establishment of the office started as planned. After its first year of operation, however, it was discontinued, apparently because it focused its strategy on donations in violation of the original purpose of not asking for charity.

Two publications were issued in support of the development and promotions programs and have been widely distributed: "Highlights 1989-1990" and a nice full-color folder called "CATIE." Many publications have also been produced by CATIE's projects, and these can be used for promotion, image building, and fundraising purposes. Particularly appropriate and professional pieces have come from projects like IPM and MADELENA.

### **C3a(3). Comments**

The development initiative failed both in strategy and continuity. From its very approach, the plan was contrary to expectations. Moreover, a one-year campaign is too short a period of time to obtain results.

CATIE remains very weak in carrying out major programs and corporate relations activities to enhance its financial self-sufficiency. Donor relations and fundraising have not been well organized, and the Center has had difficulty obtaining its needed financial commitments in a way that does not distort the institution's basic mission.

The belief is frequently expressed at CATIE that a high proportion of the funds from short-term projects contribute to financial instability. This does not appear to be true. Stability more likely depends on the existence of a small institutional nucleus with strong finance, technical, and management capabilities.

### **C3b. Progress Towards Developing a Foundation or Endowment Mechanism**

The RHE project was charged with investigating the possibility of developing a foundation to support CATIE and to manage its funds. Specifically, the project was to determine what type of foundation or endowment mechanism should be considered (including size, terms, and conditions of the programs); how the mechanism was to be managed; and what would be the relationship of contributors to CATIE.

#### **C3b(1). Background**

Technical resources were provided in the project amendment to help CATIE explore, analyze, and develop viable mechanisms that strengthen the long-term core needs of the institution. Among these needs was a foundation to help solicit and handle gifts, endowments, scholarships, and revenue from patents and copyrights. In addition, a policy on the assignment of rights and royalties from faculty patents and copyrights needed to be developed.

#### **C3b(2). Outcome**

Four documents were produced by the project to address this issue. These papers explore the pros and cons of a foundation as the legal structure for supporting CATIE, as well as different organizational forms, steps in a foundation project plan, and tasks required for implementation.

#### **C3b(3). Comments**

The next step, already underway, is the search for an expert to advise CATIE on the appropriate type of foundation or endowment mechanism, recommend the country where such an organization should be established, train staff in fundraising, and create an operations manual, policies, regulations, and strategy. CATIE must move rapidly from these

preliminary stages because the Center is still far from enjoying a proactive fundraising attitude and performance.

### **C3c. Alumni Affairs Office Programs**

The project design called for the establishment of an alumni affairs office in year three of the project, allowing for full implementation of necessary training activities. This office is particularly important to CATIE to quantify current alumni profiles, increase alumni involvement in fundraising and student selection, and develop greater technical input toward research and training activities.

#### **C3c(1). Outcome**

The alumni affairs office was established as planned. A series of three newsletters were published and distributed to keep graduates informed about programs, activities, new faculty, and specific country activities. Databases for student tracking have been developed, including the PASE system which is explained in more detail in Section III.D of this report. The graduate record system is being updated and a survey of former students was carried out.

However, the outcome of alumni affairs activities was contrary to expectations. The strategy was to establish mutually beneficial relationships between CATIE and its alumni in which CATIE was expected to gain from the involvement of its former students in fundraising. What instead happened was these alumni turned to CATIE for financial support. The issue of alumni affairs was thus inconveniently mixed with that of student welfare, and in any case the alumni affairs office lacked an operations budget.

CATIE's strategy also focused on building alumni associations. Nine associations were established and two—Mexico and Colombia—are close to formalization. Such associations can accomplish a number of things including suggestions for strengthening the research and training programs, assisting in-country development by proposing and aiding projects, and working with in-country agencies and institutions to further CATIE's goals and assist new graduates. Once again, however, the associations instead came to CATIE asking for funds to finance their own plans.

The director of the alumni affairs office presented annual plans and budget but apparently never received feedback from central administration. As a result, a budget does not exist for this office, and the director eventually resigned in September 1992.

#### **C3c(2). Comments**

CATIE's development work during the project period did not produce an effective marketing strategy directed at governments, foundations, international organizations and alumni. However, there is some ongoing activity in at least two of the alumni associations. For more discussion of this topic, see Section III.D, Networking.

## **D. Networking**

### **D1. Introduction**

The scope of work for this evaluation requires the examination of several of the research and education linkages CATIE maintains as part of its normal course of business. Not mentioned in the SOW, but of primary importance as far as the Regional Higher Education project is concerned, are two formal networks established in 1985 as part of project activities: REDCA (Regional Network for Cooperation in Education and Research in Agriculture and Renewable Natural Resources) and PASE (Program of Alumni Support and Supervision). This section will present an overview of CATIE's networking activities, mentioning the types of linkages established and briefly highlighting a few examples of each. The bulk of the data collection, presentation, and analysis is focused on describing and evaluating the activities and accomplishments of REDCA and PASE.

For the purposes of this evaluation, networking is defined as the means of achieving professional exchange of knowledge and collaboration on teaching and research endeavors. It entails both formal and informal communication in publications (newsletters, magazines, journals, reports), meetings (seminars, conferences, workshops, round tables), and small group or individual writings or speeches. In order for networking to be effective, these communications should result in collaborative activities such as professional exchanges (visiting professors or scholars) or joint projects (research replicated in several countries and multi-institutional academic and training courses).

The evaluation of CATIE's networking activities financed by the Regional Higher Education project is based on secondary information in the Project Paper, annual work plans, quarterly reports, and other project and non-project documents. It is also based on interviews with CATIE staff in Turrialba and member representatives of REDCA institutions and CATIE graduates in three of the seven CATIE member countries: Costa Rica, El Salvador, and Guatemala. For a complete listing of interviewees, see Annex 15 attached to this report. A list of questions typically asked of each REDCA member or group is attached as Annex 16.

The reader should note that this networking evaluation is based on a non-random sample of countries that were selected primarily because of the availability of logistic support (i.e., presence of CATIE representatives in El Salvador and Guatemala and proximity to CATIE's campus in Costa Rica). Despite the evaluation team's inability to interview sources in all relevant countries, the high degree of consistency of the comments received led the team to conclude that the description and analyses contained herein fairly reflect the accomplishments of the project's networking component.

### **D2. Scope of Networking and Technical Cooperation at CATIE**

As part of its original mandate, CATIE is engaged on a regular basis in both formal and informal research and education networks and network-like activities that accomplish a

variety of objectives and purposes. A brief description of a number of these follows, with examples.

#### **D2a. International Agricultural Research Centers**

Prior to and during the life of the project, CATIE established and maintained working relationships with various IARCs worldwide, but particularly with the International Center for Tropical Agriculture (CIAT) in Colombia. Cooperative efforts in force with the IARCs as of December 31, 1991, include:

- Management of renewable natural resources for sustainable agricultural development in the American tropics (CIAT and IICA).
- Research program on forage and tropical pastures in the Central American and Caribbean region (CIAT).
- Maintenance of CIAT's basic bean seed collection.

#### **D2b. U.S. and other Foreign Universities**

CATIE has established a number of relationships with universities in the United States and around the world (principally Europe) involving joint research projects, training, and educational exchanges whereby Central American students complete studies abroad and U.S. and European students study at CATIE. A list of joint research and teaching activities with U.S. universities is attached to this report as Annex 17. Some examples include:

- Cooperation on research, teaching, and graduate level studies, with emphasis on tropical agricultural sciences (University of Wageningen, the Netherlands).
- Design of a course and database on "Soils of the American Tropics" (Cornell University).
- Development of an annual course on plant cell tissue culture (Colorado State University).
- Development of integrated pest management strategies for use in tropical crops and conditions (University of Florida).
- Student exchanges: CATIE has hosted Ph.D. students from Cornell University to conduct dissertation research; Colorado State has trained seven M.S. and one Ph.D. student from CATIE member countries.

#### **D2c. International Donors**

By far the majority of technical and educational cooperation that CATIE undertakes is with international donors from the United States, Canada, Japan, Germany, the Netherlands,

Denmark, Sweden, Finland, and the European Community. According to the 1991 CATIE Annual Report, the Center was involved in 78 agreements for technical cooperation that involved donor financing. Twenty-six of these agreements provided direct financing to CATIE through bilateral projects, while the rest involved CATIE as a cooperator on multilateral activities.

#### **D2d. Central American Region Institutions**

CATIE's principal outreach clients are public and private entities in its member countries. CATIE's cooperation and assistance activities are normally carried out within the framework of bilateral and multilateral external donor-assisted projects, though the Center is also involved in reciprocal cooperation (no external financing) with several regional institutions. The majority of agreements are nonspecific, calling for general joint support for efforts in research, technology transfer, and human resources development in the agricultural and natural resources sciences.

#### **D2e. International Research and Education Networks**

CATIE provides leadership to several formal and informal research and education networks and acts as a participant in others. For the most part, networks in which CATIE plays a leading role are those that are established and funded through its projects. Examples include:

- **Regional Network for Cooperation in Education and Research in Agriculture and Renewable Natural Resources (REDCA)**, supported by the Regional Higher Education project.
- **Regional Integrated Pest Management Network** (diagnosis and fitoprotection), supported by ROCAP's RENARM project.
- **Regional Network of Institutions Linked to the Promotion of Multipurpose Trees project (MADELENA-3)**, sponsored by RENARM.
- **Latin America/Caribbean Network for Conservation and Management of Animal Genetic Resources.**
- **Latin American Agroforestry Network**, financed by the International Development Research Centre and consisting of an IDRC-supported regional agroforestry project.

Formal networks in which CATIE plays a supporting or participatory role include the following:

- **Latin American Watershed Management Network**, led by FAO.
- **Latin American Network for Protected Areas.**

- Regional Network on Generation and Transfer of Technology in Cacao (PROCACAO), led by IICA and financed by ROCAP.
- International Network for Evaluation of Tropical Pastures (RIEPT).
- Latin American Research Network on Animal Production Systems (RISPAL).

### **D3. REDCA**

The balance of this section focuses on REDCA, and to a lesser extent PASE, as REDCA was the primary networking element supported by the project.

The RHE project will have provided approximately \$496,000 over its life for CATIE to develop programs and professional linkages with international centers of excellence. According to the Project Paper, networking would thus allow CATIE staff to:

- Learn about current research development in other areas.
- Take advantage of these developments for their research projects.
- Avoid duplication of efforts.
- Upgrade their own technical skills through professional relationships with peer groups.
- Strengthen linkages with national-level research activities in CATIE member countries.

CATIE's principal action to carry out the above activities was the founding and support over time of REDCA.

#### **D3a. Institutional Makeup**

REDCA membership consists principally of higher education institutions and councils, ministries of agriculture and natural resources, and research institutes in each of CATIE's member countries. Beginning with a base of 30 in 1986, REDCA membership has grown to 84 institutions as of August 1992, plus a sub-network of seven U.S. universities. (A list of member institutions is included in Annex 18).

#### **D3b. Purpose and Objectives**

REDCA's purpose is to improve the quality of research, higher education, training, and extension in its member countries. Its objectives are to foster cooperation among institutions at the national and regional levels and to facilitate CATIE's reciprocal cooperation with the institutions belonging to the network.

Through the operation of the network, CATIE intends to help strengthen national research and education institutions, receives support from the institutions to help improve its own programs, and promotes interchanges and cooperation among all of the institutions.

### **D3c. Activities and Accomplishments**

Activities of REDCA can be classified under three types: those occurring at the national level, involving communication and cooperation among institutional members in each country; activities at the regional level among institutions in two or more countries; and activities between CATIE and institutions in a particular country. Examples of the types of activities that took place in three selected countries follow below.

#### **D3c(1). National Level**

**Interinstitutional communication.** REDCA provides a neutral forum for representatives of agricultural and natural resources ministries, public and private educational institutions (mainly universities and technical schools), research institutes, and in some cases NGOs to meet, discuss issues of mutual interest, and learn more about the character and resources of the other institutions. In nearly all countries, participation in REDCA meetings and activities has led to institutions formally communicating with each other for the first time in an environment focused on educational and research issues rather than on politics. The president or secretary of each REDCA national committee periodically calls meetings to discuss issues and exchange ideas on a regular or ad hoc basis.

**Interinstitutional cooperation.** Participation in REDCA has led to specific instances of cooperation and collaboration which might not have taken place otherwise. Examples include:

- In El Salvador, REDCA representatives jointly reviewed and revised the basic curriculum leading to agronomy degrees. They established a working group of representatives from all REDCA institutions and put together a seminar workshop.
- In Costa Rica, REDCA institutions assisted CONICIT in compiling a national list of professionals conducting research in the agriculture and natural resources sectors. In El Salvador, REDCA helped put together a list and classification of theses on topics related to agriculture and natural resources management.
- Though REDCA lacks its own funding for training, several training courses were improved by the inclusion of trainers and students from several member institutions. In El Salvador, four REDCA groups joined to present a course on soil fertility to Ministry of Agriculture extension agents. Several also helped present a course on biotechnology. In Costa Rica, three REDCA members are jointly sponsoring a seminar on the future of agricultural education given changes in Costa Rica's economy and technology.
- In 1990, CATIE developed some basic concepts aimed at stimulating interest among REDCA members to begin joint research projects on sustainable agriculture in specific geographic areas in each country. This has led to selection of pilot areas in several countries, rapid appraisal studies in Guatemala, and concerted actions in the Atlantic region of Costa Rica. In the remaining countries, however,

action is awaiting greater institutional commitment (e.g. resources) and/or external funding.

### **D3c(2). Regional Level**

A significant portion of the funding designated for networking under the project was used to offset some or all of the costs of holding an annual REDCA meeting in one of the member countries and to pay part of the costs of country representatives attending the meetings (normally two project-paid trips per diem per country, plus several CATIE staff). Annual meetings have been held every year since 1986 and have allowed presentation of research and education programs and of results of member institutions, as well as the opportunity to discuss topics related to agriculture and natural resources management. The meetings have also given representatives the opportunity to know one another and their institutions better.

Examples of communication and collaboration among REDCA members in different countries are much less numerous, due in part to higher costs and the lack of specific funding. There are, however, a few examples which illustrate at the least the potential benefit of increased efforts at this level.

- The Universidad Centroamericana (UCA) in El Salvador sent several students to Guatemala for a training course on the production and marketing of horticultural crops.
- As a result of contacts made at the REDCA annual meeting, a Dominican banana specialist was able to provide assistance (via fax) on banana production to the Universidad Catolica del Oriente (UNICO) of El Salvador.
- The REDCA National Committee facilitated the organization of a regional seminar entitled Rural Communication in Central America, which included farmers and participants from Central American public and private institutions. Funding for this event was provided principally by the sponsoring institutions, and ROCAP paid for a bus that traveled from Guatemala and picked up participants in several countries.

### **D3c(3). Activities and Accomplishments between CATIE and REDCA Members**

CATIE's investment in networking has resulted in the establishment and strengthening of relationships with REDCA members, principally in the areas of information exchange, technical cooperation, selection of students for the master's program, and calculation of demand for agricultural and natural resources training.

- CATIE has used REDCA representatives to help determine the demand for its training programs by analyzing training requests completed by REDCA members in each country. This contact also provides participation in CATIE training for employees or students from institutions which may otherwise not have the opportunity.

- REDCA members are allowed to review the candidacies of M.S. students from each country and to recommend which student should be accepted. Priorities include expansion of opportunities for students from institutions not previously affiliated with CATIE and areas of study that would produce professionals with skills in key technical areas.
- In Guatemala, a CATIE consultant helped the Universidad Rafael Landivar develop the curriculum for a master's program in agricultural marketing.

#### **D3c(4). Activities Planned or Proposed but not Completed**

A number of activities were planned or proposed either by CATIE or the network that were not carried out or abandoned before completion. The main reason given for the lack of follow-through on these activities was the lack of funding from CATIE, external donors, or the participating institutions. There are indications that as REDCA reorganizes itself, some of these activities may be reviewed, revised, and re-presented for possible external donor funding. Following are some examples:

- The 1988 annual work plan briefly laid out a strategy for socioeconomic studies and research activity headquartered in the Dominican Republic. Proposed areas of research included generation and transfer of technology, agricultural credit and marketing, agribusiness management, agrarian reform and peasant movements, and natural resources conservation. Curriculum for the studies included rural development and cooperative and research management. The initiative died for lack of specific funding commitments.
- As an outgrowth of the REDCA meeting held in Honduras in September 1989, a proposal was developed to fund 114 fellowships (\$15,000 each) to support the work of young, graduate-trained scientists from Central America, Panama, and the Caribbean in aquaculture, animal and vegetable production, forestry, food technology, natural products, and rural technology. The proposal was not funded.
- The 1989 project work plan contained a complete proposal (about \$400,000) for the creation of a communications network. The proposal was developed by a consortium of CATIE, UNESCO, and FAO, presumably for funding by AID.
- As part of REDCA, a sub-network of U.S. universities was established to increase educational and research cooperation with REDCA members. The most active university was Iowa State (ISU). ISU cited a number of activities it could offer CATIE and REDCA members, including a collaborative program of "tele-education," which was essentially the development of ISU courses on videotape covering several agriculture and natural resources topics. ISU also proposed to train 16 professionals (two from each member country plus two from CATIE) at the Ph.D. level in agricultural education in order to form core groups in higher agricultural education. Neither of these programs was funded. Participation in

REDCA on the part of the remaining sub-network universities has been limited to sporadic meetings and relationships developed on a bilateral basis.

- CATIENET was envisioned as a means of improving communications among the REDCA membership. Its services would include electronic mail, file transfer, electronic access to CATIE's databases, and remote data processing. CATIE is still in the process of trying to establish such a communications network.

### **D3d. Evaluation of REDCA's Effectiveness**

Reviewing the networking objectives stated in the Project Paper and outlined at the beginning of this section, and comparing them with the objectives and purposes of REDCA, the evaluators found some significant differences:

- The Project Paper's objectives point to increasing cooperation and contacts with "international centers of excellence"—presumably the IARCs and developed country universities. REDCA objectives point toward developing and strengthening relationships between CATIE and research and education institutions in its member countries.
- The Project Paper's objectives aim toward improvement of the skills and knowledge of CATIE's professional staff. REDCA objectives are not specific in this area, but seem to indicate that professional staff of member institutions would benefit most.

The remaining objectives outlined in the Project Paper are also stated or unstated objectives of REDCA. The evaluation team found no evidence that there was an attempt to obtain the approval of ROCAP for reorienting the project's networking activities toward meeting the objectives of REDCA. CATIE did, however, inform ROCAP continuously (at least since 1988) about the activities it carried out on behalf of REDCA under the networking rubric. Thus the evaluation team assumes tacit approval on ROCAP's part of the networking activities that supported REDCA, and we therefore evaluated REDCA's performance based on its stated objectives, rather than the networking objectives stated in the Project Paper.

#### **D3d(1). National Level**

Based on the responses given by REDCA representatives during interviews and discussions and on their high level of enthusiasm for the REDCA concept, the evaluators conclude that REDCA activities at the national level represent the strongest positive result of the project's networking component. The formation of REDCA as a horizontal, round-table network has provided an opportunity for national research and academic institutions to communicate with each other openly, get to know each other's strengths and weaknesses, and begin to share information, collaborate on course development, and implement cooperative projects in pilot development areas.

While there is much enthusiasm at the national level, there are still some strong challenges ahead if REDCA is to reach its full potential. As the project ends and CATIE cedes leadership responsibility to the membership at large, the REDCA committees will need to take greater responsibility for their future activities. One important element is raising funds for joint activities from external sources (e.g. donors) or the institutions themselves. REDCA members seem to be looking for leadership in development from the outside, but the network would be much stronger and more independent if participating institutions had enough commitment to fund REDCA activities even at a modest level. The more participating institutions put in to REDCA, the more benefits they will receive.

### **D3d(2). Regional Level**

In the view of the evaluators, much less has been accomplished at the regional level than should have been. As stated above, the principal regional activity has centered around the annual REDCA meeting, financed in part by the project and organized by the national REDCA committee in a different member country each year. For the most part, these meetings have involved sharing of experiences, discussions of important sustainable agriculture and natural resources management topics, and the passing of a number of very general resolutions pertaining to REDCA's future management and functions.

Unfortunately, action on these resolutions, communications, and educational and research interchanges have been almost nil. There have been, however, a few bright spots, such as the Regional Rural Communications workshop sponsored by REDCA/Costa Rica. What has been lacking to make more interaction happen is first and foremost leadership. Someone has to come up with the ideas for joint projects or conferences, get others to buy in to the effort, and do the organizational work. The second problem is funding, though money will likely become available if the leadership and institutional commitment are present.

### **D3d(3). CATIE-REDCA Relationships**

CATIE has definitely benefitted from the rather modest investment made in establishing and supporting REDCA through the project. The Center has significantly increased the number of clients it reaches in member countries via support of the national committees. Through REDCA, it is now better able to communicate effectively with its clients and has used that improved communication to understand more clearly the areas of interest and demand for its education and training programs and to design them accordingly.

At the same time, the evaluation team believes CATIE could have derived more benefit from REDCA had it made a somewhat larger investment—in effort perhaps more than money. At the national level, greater involvement and guidance could (and should) take place to help country institutions plan specific activities in pilot areas. CATIE is in a good position to benefit from this involvement, as the pilot areas provide a good opportunity to test CATIE-developed technologies and approaches, thereby providing useful feedback and showcasing CATIE's capacity and research results.

At the regional level, CATIE could have played a much more active role as facilitator of cooperation and exchanges among institutions in different countries. Because of their contacts and knowledge of events taking place region-wide, CATIE staff could develop and/or suggest multicountry or regional low-budget research and education efforts—at a minimum involving exchange of information and results among institutions doing similar types of work. Publishing a regional network newsletter on a monthly or quarterly basis could also facilitate greater exchange of ideas among CATIE and member countries.

#### **D3d(4). Lessons Learned and Recommendations**

Overall, the evaluation team believes the investment made through the project to support REDCA has been worthwhile. Following are some lessons learned that could be useful in furthering REDCA's development.

- In order to be effective, networks need to be based on a need that is real and not being filled by other means. REDCA found its niche principally by establishing itself as a neutral forum in which scientific exchange could take place among entities of equal standing (the concept of horizontal relationships).
- It is possible to achieve significant benefits with limited resources (particularly funding) if interest in cooperation among participating individuals and institutions is high. Conversely, no amount of funding will make an effort successful if institutional commitment and interest is lacking.
- Intellectual leadership is a key element. With good ideas and well thought-out planning, funding problems should decrease. With CATIE's help, REDCA developed several proposals for projects which were ultimately dropped for lack of funding. A review of these proposals revealed that several of them, while perhaps good ideas, were very general and insufficiently developed to warrant serious consideration by donors. It would have been better to be more modest in the demand for funds and much more specific about what the projects would do and what benefits would result.
- There is, and will be, a need for some organization to play a coordinating role if REDCA is to function effectively at the regional level. Though more certainly could have been done, CATIE's initial investment and willingness to lead was critical to REDCA's development. It seems unlikely that REDCA will prosper regionally unless that role is filled by another organization. If the regional element is important enough to the members, perhaps they could arrange to fund a secretariat.

Where does REDCA go from here, now that CATIE will no longer play the coordinator/facilitator role? The network will likely survive at the national level since the costs of participation are low and, at least until now, benefits have been significant enough to maintain interest.

Should REDCA be externally funded? If so, by whom and at what level? These questions were discussed with various REDCA member representatives in both individual and group sessions. Heretofore, there has been a definite wait and see attitude with respect to REDCA's overall functioning. There is a general belief that funding is needed and that it should be provided by external sources since it is not available internally.

In truth, however, resources are available through institutional core and project funds, if the activities proposed by REDCA are sufficiently important to the institutions to warrant their support. REDCA exists in a marketplace of investment alternatives, and its proposals must be competitive with others in order to receive funding. External assistance, meanwhile, is a double-edged sword. It causes institutions to be overly conservative and unwilling to risk their own political and economic capital. Many institutions have become overly dependent on outside funding, believing they cannot do things on their own when in fact they can if they are willing to commit. The effort and results surrounding the organization of the Rural Communications seminar briefly described above is a good case in point.

To answer the questions posed above, the evaluators believe REDCA deserves consideration from external funding sources to the extent that REDCA members are committed and willing to invest their own capital, and to the extent that REDCA ideas and investment alternatives are clear, specific, and competitive with those put forth by others. Through the years, large investments have been made in human resources and institutional development in developing countries. It is time to discover if these investments have paid off by allowing the institutions and individuals to develop their own concepts and strategies and to compete with others for funding. It should be up to REDCA and its members and representatives to decide whether they wish to pursue external assistance, wish to fund themselves, or choose some combination of both. The future of REDCA will and should depend upon the decisions and commitments of its members.

#### **D4. PASE**

The Program of Alumnae Support and Supervision (PASE) was begun in 1988 with some limited support from the Regional Higher Education project. Its purposes were the following:

- Develop and maintain an alumni registry containing current information on each graduate.
- Facilitate interchange of technical and scientific information between alumni and CATIE's technical departments.
- Promote alumni interaction so that they will be better able to share experiences, resources, and professional opportunities.
- Facilitate the development of CATIE alumni associations in each member country.

- Benefit CATIE by having its alumni bring in additional opportunities and funding sources (an unstated objective).

The balance of this networking section will focus on the progress made by CATIE and its alumni in establishing and supporting alumni associations as a means of improving communication and joint research and education activities.

#### **D4a. Activities and Accomplishments of Alumni Associations**

As part of the evaluation methodology described above, relevant documents were reviewed and interviews held with members of CATIE alumni associations in Guatemala, El Salvador, and Costa Rica.

In Guatemala and El Salvador, alumni associations were in established in 1989 but have not been active or met as a group for 18 months and two years, respectively. There is therefore nothing of substance to report regarding activities in these two countries.

In contrast, the alumni association in Costa Rica (AGIICAT) has been quite active. It was also formed in 1989 and has around 50 dues-paying members out of the 150 alumni currently located in country. AGIICAT is well organized, conducts regular monthly meetings, and has a dynamic leadership. Its more important activities and accomplishments include:

- Production of a monthly newsletter (first issue, September 1992).
- Lobbying for three years to achieve official recognition by the Government of Costa Rica of the master's degrees earned by CATIE graduates since 1986.
- Holding periodic meetings in different institutions in Costa Rica that employ CATIE graduates, to allow members to know these organizations better.
- Signing of an agreement with CATIE that gives its members access to the Orton library and the computer center, as well as a 10 percent discount on accommodations at CATIE and entrance to the club facilities.
- Organizing (with IICA and CATIE) a short course on "Sustainable Development and the Future of the American Tropics" to be given for CATIE alumni in December 1992.

AGIICAT's major planned future project is to establish a consulting firm and develop a resume database of its members to help them find assignments—services for which AGIICAT will charge a fee.

#### **D4b. Evaluation of Alumni Associations' Effectiveness**

There is a great deal of variation among countries in terms of the effectiveness of the various associations as networking agents. The critical variables mentioned above regarding REDCA (demand, interest or commitment, leadership and coordination) are key factors in determining the effectiveness of PASE as well.

In El Salvador and Guatemala, there was no particular need that caused the associations to become active. In Costa Rica, the initial unifying force was the need to have the master's degrees officially recognized for CATIE's most recent graduates. Other advantages in Costa Rica were the large number of alumni, the willingness of a few members to take organization and leadership responsibilities, and the proximity to CATIE and subsequent ease of communication.

#### **D4c. Recommendations**

CATIE's alumni are a potentially valuable resource for extending the outreach and contacts of the Center and attracting financial support. This resource has thus far been largely untapped. CATIE should further develop its PASE program, taking a few lessons from its graduates in Costa Rica. For example:

- As part of its PASE database and its rich contacts with international funding and scientific institutions, develop a placement service for graduates and charge a fee for the service (perhaps through dues).
- Establish a dues structure whereby part of the amount charged by country chapters is remitted to CATIE to offset the cost of specific services.
- Maintain regular communications with its membership by producing a newsletter (perhaps on a paid subscription basis) and making available recent technical publications and library use, again on a fee for service basis.
- Develop a journal that would provide an outlet for the scientific and applied work of CATIE staff and graduates, provided by subscription or as part of a membership dues package.
- Convince alumni to support CATIE actively by encouraging bright students to apply for graduate study, considering CATIE as a potential provider of technical assistance on bilateral projects, and soliciting public and private institutions to contribute to CATIE's endowment and/or provide scholarships to fund graduate studies.

Adopting some or all of the above measures should strengthen the ties that CATIE has with its graduates, make communications and interactions more frequent and fruitful, and help the Center provide higher quality services to its clients.

## **E. Use of Local Currency Trust Funds**

### **E1. CATIE's Compliance with USAID/CATIE MOU No. 21**

The purpose of the agreement (MOU No. 21) dated May 14, 1985, was to help CATIE expand and strengthen the scope and relevance of its training. The agreement's term lasts until May 13, 1993, and the source of the support is the AID/FEDECOOP Special Trust. The official representatives are the director of USAID/Costa Rica, the director of CATIE, and the director of ROCAP, who was added November 10, 1988.

The agreement contains a special proviso stating that during its final 12 months, the terms and conditions under which CATIE would continue as the beneficiary and receive income generated by the Trust Fund will be reviewed. This review, to be conducted by USAID, would be based on the following criteria:

- CATIE's projected financial requirements, based on the maintenance of existing facilities and grounds; local currency costs associated with planned expansion of facilities; and local personnel (existing and identified new positions). These requirements would be reviewed within the context of CATIE's overall financial viability and progress in broadening its revenue base, for example through a fundraising program and by increasing farm produce sales.
- The status of actions taken by CATIE to follow through on recommendations made by scheduled evaluations to be conducted under the proposed USAID/Costa Rica-ROCAP Regional Agricultural Higher Education project—especially the final evaluation in year six. The agreement specifies five specific areas of progress in postgraduate college development, which we address in Section E.3, below.

Based on the evidence reviewed, the evaluation team has the following observations about fulfillment of the requirements set forth in AID/ROCAP MOU 21.

### **E2. CATIE's Overall Financial Viability and Projected Financial Requirements**

The evaluation team examined CATIE's projected financial requirements within the context of its overall financial viability and progress in broadening its revenue base. The main observations on financial viability have been given above in Section III.A, along with specific suggestions for improving a number of management practices. This section will focus on progress in broadening its revenue base through farm sales and fundraising.

**Farm produce sales.** During the project period, yearly income from farm produce sales varied but showed little overall growth, affected as it was in part by declining commodity prices. The so-called "productive" activities operated by CATIE on lands not needed for research appear to be a net drain on financial resources. The evaluation team agrees with the recommendation of the 1990 external review that these farming activities should be separated and run as distinct cost centers. If they are found to be uneconomical or

not essential to CATIE's research and education programs, they should be rented to commercial producers with the returns going to the Center.

**Fundraising.** The fundraising approach presented in the Project Paper involved a three-year plan to raise money for a minimum level of staffing, consulting services, travel, advertising, and operation expenses. For reasons not fully explained, this plan was dropped after about one year with no visible results. The matter received additional attention at the time of project extension, when \$100,000 was included for "identification and preparation of a framework for diversified funding mechanisms to finance core institutional costs on a continuing basis." The Project Paper amendment pointed out that external support opportunities are promising, but a concerted effort would be required from CATIE to diversify its funding sources. Since then, with the restructuring of the Center's governing bodies, the appointment of a very active Board of Directors, and the appointment of new director general who is pursuing the objectives in the project amendment, it appears that prospects for alleviating the pressing financial problems affecting continuity of staff and programs have improved.

Within the above context, we examined CATIE's projected financial requirements. CATIE's officers are currently projecting their needs and calculating the financial requirements for the three categories requested in Article IV of MOU 21. At this point only initial figures are available, but a detailed budget with preliminary cost estimates will be presented to ROCAP in the near future.

#### **E2a. Maintenance of Existing Facilities and Grounds**

The best available estimate of projected requirements for maintenance of existing facilities and grounds is the Dillow study, dated April 30, 1992, which predicts a total of about \$1.4 million for renovation and maintenance needs.

#### **E2b. Local Currency Costs for Planned Construction**

CATIE's first estimate for the Facilities Expansion Plan is close to \$7.4 million, which includes the construction, among others, of the following buildings and facilities:

- Conference and communications
- Media production
- Sports center
- Apartments for visitors
- Drinking water system
- Sewer pipes and treatment plants
- Expansion of and air conditioning for the library

#### **E2c. Local Personnel Requirements**

CATIE's present budget includes only \$200,000 per year for the physical plant's personnel and operating expenses. In order to upgrade this department and include regularly

scheduled preventive maintenance, several key positions for which there is no budget available need to be filled. Updated estimates are being prepared by CATIE.

### **E3. Specified Progress in Postgraduate College Development**

The following five areas are specified in MOU 21 as levels of progress to be achieved by CATIE in order for USAID/Costa Rica and ROCAP to determine whether local currency funding of CATIE should continue.

(1) The majority of the technical staff of CATIE are involved in educational activities—teaching postgraduate courses, training personnel, or acting as thesis advisors.

(2) The projected number of additional graduates per year has been achieved—exactly 30 if we compare the year that the project was approved, 1985, with the average of the last four years, 1989-1992. In other words, 51 graduates per year, compared to 21 in 1985.

(3) All of the planned construction has been completed satisfactorily, including all of the items specified in the project agreement signed by AID/ROCAP and CATIE:

- Student dormitory with 40 rooms.
- Married student apartments: one building, 20 units.
- Apartments for married students with children: two buildings, 32 units.
- Postgraduate building: administration and classrooms.
- Computer center.
- Enlargement of primary school.
- Renovation of 12 buildings for students.
- Rehabilitation and construction of training building, La Lola.
- Upgrading of water system: pumping station, tank, and distribution.
- Renovation of high tension electric lines.
- Staff housing: 20 houses planned, 12 built, and funds for eight others authorized to build 16 staff apartments.

In addition to the facilities listed above (all of which were completed), the following additional works were carried out with remaining funds and the authorization of ROCAP.

- Cafeteria.
- Houses for workers at La Lola.
- Road improvements at CATIE and La Lola.
- Rehabilitation of apartments for students at Cabiria.
- Dredging the lake.
- Deep wells at La Lola and Finca.

(4) The student body is characterized by a predominance of individuals from the Central America and Panama region, but includes students from other CATIE member countries such as the Dominican Republic.

(5) CATIE's long-range planning includes evidence of ample coordination and consistency with the human resources needs of its member countries as identified by the respective governments. The curriculum development plan includes consultation with the countries and the member institutions of REDCA so that the Center's studies fit the needs of the region. The national REDCA committees and the academic committee also provide advice on these aspects, and CATIE organizes training courses responding to needs presented by these countries.

#### **E4. Facilities and Equipment**

##### **E4a. CATIE's Criteria for the Design, Procurement, Construction, and Financing of Facilities Provided by Project Funds**

The evaluation team found the quality and design characteristics of the buildings, equipment, facilities, and vehicles purchased with both local currency and dollar funds from this project adequate for the area and for their intended use. Nevertheless the procurement process was not fully satisfactory (see Section E4b. below).

##### **E4a(1). Construction Activities Actually Accomplished as Related to the Approved Master Plan**

See Section E3. above.

##### **E4a(2). Cost Factors and Control Procedures**

The evaluation team found that among the individuals who participated in the evaluation of bids, selection of contractors, and supervision of building projects, there was not always enough concern about or analysis of the cost factors involved to ensure that the actual purchase prices and conditions were the best available to CATIE. In the purchase of other goods and services, we found there was more concern over costs.

In one particular case—the cafeteria building project—the physical plant committee did not thoroughly analyze significant price increases in the cost estimates and between these and the actual bids. However, in other construction projects the contracted costs were significantly below cost estimates, for example:

<b>Project</b>	<b>Cost Estimate</b>	<b>Contract Cost</b>	<b>Cost Diff.</b>
Housing for professional staff	¢58.9 M	¢26.9 M	46 percent
Postgraduate academic building	¢26.7 M	¢21.9 M	82 percent

### **E4a(3). End-use Performance**

The evaluation team visited, reviewed, and found satisfactory the use of all buildings and most equipment and physical systems that were constructed, repaired, or upgraded under the project. The water and electrical systems at the main site were inspected and considered to be fully functional. The La Lola and cattle farms were not visited due to time limitations, and therefore we could not inspect the facility repairs and farm equipment there. The tissue culture and pathology labs were also not visited due to lack of time. The physiology lab has been closed down since beginning of 1992 and was not open to us because there is no one currently in charge.

The team did visit the animal nutrition, forestry, and soils analysis labs and storage rooms, and inspected the equipment bought there under the project. We found that all of the most expensive equipment was accounted for either in the lab, in storage or in the repair shop.

We were told that one missing item of significant value was a spectrometer from the physiology lab that had been loaned to a CATIE project but not yet returned. Minor equipment such as glassware and reactives were not inspected; during the April 1991 earthquake there was much damage to these fragile items.

A common complaint from those responsible for the labs was the delay in procuring equipment. Moreover, when equipment was received, the following problems arose: requested items were often missing (e.g. Mettler scale, model PE 1600; DIONEX Cat. 035290); some had been substituted by other models that did not function properly for the task (e.g. an analytic Mettler scale, model 460P, was received instead of a model PE 360); and some items were useless from the moment they arrived (e.g. the Accuphast electrodes and the Fisher model Accumet 915 potentiometers). Otherwise the equipment is considered satisfactory by those who use it.

### **E4b. Compliance with Approved Procurement System and Procedures**

We found that CATIE has not always complied fully with its own procurement procedures. We randomly sampled the documentation of 21 purchases processed during 1992 (previous year's records had been sent to accounting for filing and were not available). Our sample included the following categories:

- Vehicles and parts
- Vehicle repair services
- Office and cleaning supplies
- Office equipment
- Equipment
- Construction materials

Of the 21 samples, 13 showed evidence of not being acquired according to the present procurement procedure, although these variations did not greatly affect the final cost to CATIE.

Specifically, the requirement of obtaining at least three competitive bids for purchases over \$40,000 was not always fulfilled due to several reasons given to us by the head of procurement:

- Direct instructions from superiors to purchase a product from a specific supplier.
- The procurement department or the requester of the goods felt they already knew which supplier offered the best conditions.
- Procurement thought there were no other suppliers available for a particular product.

With respect to short-term professional services requirements, the head of human resources normally receives specific instructions on whom to contract and the relevant salary conditions, without looking for and evaluating several candidates. Contracts are drawn up by human resources and procurement only processes the signed contract and the payments. Such was the case with simultaneous translation services costing ₡337,800 plus lodging and food for four days.

As explanation for these exceptions, the team was told that first, it was not clear which were CATIE's approved systems and procedures in the early part of the project. CATIE's most recent document on this subject is the Manual for Acquiring and Contracting Goods and Services, dated December 1990. We were told this manual was not officially approved until October 15, 1991, by a memo from the former director general.

Second, the chief of the physical plant and the head of procurement stated that they were not fully following this document and that this fact was known to their superiors. Third, in our final meeting at CATIE, the director of administration and finance stated that in the case of the professional services, the manual did not say who is to perform the necessary steps. But he accepted that some procedures were not being fully followed and said he will take corrective actions.

We believe CATIE should communicate officially to all its personnel involved in procurement what procedures are to be followed and what exceptions are allowed. These policies should be incorporated into a new version of the Manual for Acquiring and Contracting Goods and Services.

#### **E4c. Effectiveness of Internal Controls**

From the above-mentioned anomalies we can state that CATIE's internal controls are not totally effective in preventing and correcting variations from official procedures and ensuring that the actual purchasing price and conditions are the best possible.

The participation of the internal auditor in several committees was questioned by the team since he is currently involved in decision making processes for matters in which he is also responsible for auditing ex-post. He offered to review his role with the director of administration and finance.

**E4d. CATIE's Planning and Budgetary Records Related to Maintenance and Repair Concerns**

**E4d(1). Maintenance, Staffing, and Training**

The head of general services presented a list of the individuals that deal with the maintenance of buildings, homes, grounds, and furniture. There are maintenance crews totaling 13 individuals that actually do perform a great deal of corrective maintenance. Major repairs of buildings and homes are out-sourced to local contractors in Turrialba, leaving CATIE's crews for short-term repairs and urgent jobs.

The training level of in-house maintenance crews was considered low by the head of general services, but there were no specific plans to improve their capabilities.

**E4d(2). Maintenance Financial Projections**

The maintenance budget for 1992 obtained from accounting totals \$508,661, with an actual expenditure up to September 30 of \$433,839, or 85 percent of the budget.

The amounts for maintenance items are as follows:

	1992 Budget		Budget Spent by 9/92		Amt. Spent/Budget Percent
	Amount	Percent	Amount	Percent	
Furniture	\$20,747	4.1	\$18,188	4.2	87.0
Laboratories	24,856	4.9	7,443	1.7	29.9
Buildings	37,361	7.3	21,641	5.0	57.9
Vehicles	301,336	59.2	354,102	81.6	117.5
Computer equip.	73,344	14.4	12,305	2.8	16.8
Tools	36,800	7.2	14,996	3.5	40.7
Classrooms	297	0.1	101	0.0	34.0
Equipment	13,920	2.7	5,063	1.2	36.4
<b>TOTAL</b>	<b>\$508,661</b>	<b>100.0</b>	<b>\$433,839</b>	<b>100.0</b>	<b>85.3</b>

## **F. Lessons Learned**

The evaluation team feels there was rich experience gained through the process of executing this project, and we have noted here a few of the items that might be considered lessons learned.

### **F1. Management and Resource Allocation**

**Refocusing institutional balance through investment.** In this case a project was designed essentially to correct what was seen as an inadequate balance in funding and a lack of staffing and emphasis on postgraduate education and training. Institutional focus was heavily influenced by a large number of individual donor-funded projects, many without provisions for specific staff participation in teaching. The staff positions funded under this project (the single largest budget item) were also assigned to research departments, though they maintained specific teaching and thesis supervision responsibilities. This approach did not drive a wedge between teaching and research, but helped gain fuller participation of the research departments. Perhaps as a follow-up to this result, many of CATIE's research contracts are now being negotiated with specific teaching responsibilities included in the job descriptions.

To benefit fully from an investment in information systems, planning, and budgeting, the latter two must be organized in a logical sequence and allow constant feedback to all decision making levels. This kind of budget follow-up is especially valuable for those responsible for projects and programs, and it helps build a sense of institutional responsibility for all involved.

### **F2. Staff Development**

Among the key issues in staff development are adequate incentives to attract top personnel and additional opportunities to stimulate them to work diligently and productively. Adequate monetary compensation is basic, of course, including both salary and benefits. However, many professionals are attracted by other incentives such as opportunities for professional growth through cooperative work and exchange of ideas with other specialists in their fields, and the possibility of advanced specialized training through a study leave program. These kinds of measures and others merit support as ways to build and maintain competence and provide creative teaching and research.

### **F3. Curriculum, Development, and Alumni Affairs**

Concerted efforts are needed from all of CATIE's personnel, associates, and friends to strengthen certain very important aspects of the Center: product and service marketing orientation, values attitudes, and skills; and reinforcement of institutional traits such as self-esteem, sense of identity and pertinence, and pride.

The curriculum needs continued upgrading in response to macro changes. In the past, CATIE's students were prepared with their future performance in research and teaching or

their continuity towards Ph.D. degrees in mind. Now societies in the region are asking for professionals to strengthen government institutions and private enterprises.

The selection of consultants for future curriculum technical assistance should take into account CATIE's agricultural and natural resources research tradition.

#### **F4. Networking**

To be effective, networks need to be based on a need that is real, and that is not being filled by other means. REDCA found its niche principally by establishing itself as a neutral forum in which scientific exchange could take place among entities of equal standing (the concept of horizontal relationships).

It is possible to achieve significant benefits with limited resources (particularly funding) if the participating individuals' and institutions' interest in cooperation is strong. REDCA made good progress, particularly at the national level, because interest and commitment were relatively high. Conversely, no amount of funding will make an effort successful if institutional commitment and interest are lacking.

Intellectual leadership is a key element. With good ideas and well thought-out planning, funding problems should decrease. With CATIE's help, REDCA developed several proposals for projects which were ultimately dropped for lack of funds. A review of the proposals revealed that several of them, while perhaps good ideas, were very general and insufficiently developed to warrant serious consideration by donors. It would have been better to be more modest in the demand for funding and much more specific about what the projects would do and what benefits they would create.

There is, and will be, a need for some organization to play a coordinating role if REDCA is to function effectively at the regional level. Though more certainly could have been done, CATIE's initial investment and willingness to lead was critical to REDCA's development. It seems unlikely that REDCA will prosper regionally unless that role is filled by another organization. If the regional element is important enough to the members, perhaps they could arrange to fund a secretariat.

#### **F5. Local Currency Trust Funds**

Without the local currency component, CATIE would have been severely handicapped in its efforts to double the number of graduate students and improve the quality of education. While the dollar funding was basic for expanding the highly qualified staff dedicated principally to teaching, the facilities built with local currency provided renovation of existing dormitories, construction of new dorms, a postgraduate building, enlargement of the elementary school, staff housing, upgrade of the pumping station and water distribution system, renovation of the electrical system, construction of a computer center and cafeteria, and other works needed to expand the postgraduate program. Additional steps identified in this report are still needed, as is an adequately staffed and funded preventive maintenance program. However, the local currency component has put in place key pieces of a good

basic plant that should serve well in the further strengthening of the education program at CATIE.

ANNEX 1

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**CATIE PROCUREMENT RECORDING PROCEDURES**



## CENTRO AGRONÓMICO TROPICAL DE INVESTIGACION Y ENSEÑANZA

Turrialba · Costa Rica · Teléfonos: 56-64-31 · 56-01-69 · Telex: 8005 CATIE C.R. · Fax 56-1533 · Cable: CATIE Turrialba

2 de noviembre, 1992  
DF-595

### M E M O R A N D O

A : Miguel A. García, Evaluador Higher Education  
DE : Luis Enrique Ortiz, Contralor  
ASUNTO : Políticas para el registro de activos fijos

Con base en su solicitud, pongo en su conocimiento las siguientes políticas del CATIE para el registro de sus activos fijos:

- 1- Toda compra de mobiliario o equipo se tramita por medio de la Unidad de Relaciones Comerciales, siguiendo los procedimientos establecidos para la adquisición de bienes y servicios.
- 2- Todo activo adquirido por compra o donación debe ser plaqueado por la Unidad de Relaciones Comerciales, la cual envía copia de los documentos a la oficina de Control de Activos para su debido registro.
- 3- La oficina de Control de Activos debe registrar el bien adquirido, en el Sistema de Activos Fijos incluyendo los datos solicitados por el sistema como; serie, placas, marcas, modelos, fecha de adquisición, vida útil, color, etc, etc. Este sistema tiene dos componentes para el registro de todos los activos del Centro.
- 4- En el primer componente del sistema se registran todos los bienes adquiridos por planta básica, ya sea por compra o donación y cuyo costo es igual o superior a us\$100.00. El monto total del archivo de este componente debe ser igual al monto registrado en los libros del CATIE.

En el segundo componente (control auxiliar) se registran todos los bienes adquiridos por los proyectos, incluyendo los bienes de planta básica cuyo valor es menor a us\$100.00.

BEST AVAILABLE DOCUMENT<sub>2</sub>

5- Al finalizar cada proyecto, y si contractualmente así estuviese convenido, se registran todos los bienes del proyecto con valores iguales o mayores a \$100.00, en el archivo de activos de planta básica, efectuando los registros correspondientes en los libros del CATIE.

6- Se debe realizar un inventario anual y conciliar el recuento físico contra los registros existentes, tanto del Sistema de Control de Activos como del registro auxiliar.

7- Los semovientes son registrados mediante un avalúo efectuado por peritos externos al Centro y su valoración responde al precio de mercado más sus características genotípicas y fenotípicas. Este sistema de valoración cambiará para 1992, ya que se registrará al valor de carne en el mercado.

Con respecto a los vehículos, equipo y mobiliario, debo informarle que son registrados a su valor histórico (precio de factura). Un grupo de estos activos adquiridos hace muchos años fueron registrados de acuerdo a un avalúo externo que fue practicado por falta de documentación de respaldo.

Los edificios construidos están registrados también mediante un avalúo excepto los financiados por AID-Colones.

Actualmente no se registra gasto alguno por concepto de depreciación sobre el valor de los activos incluidos en los registros de contabilidad.

Agradezco su amable atención al presente

lc.df595-92\*2.11

BEST AVAILABLE DOCUMENT

**ANNEX 2**

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**RHE PROJECT BALANCE SHEET**

COMPARACION DE BALANCES DE SITUACION  
A TRAVES DE LA VIDA DEL PROYECTO

	'85	'86	'87	'88	'89	'90	'91							
<b>ACTIVO</b>														
Activo Circulante														
Efectivo caja y banco	507.0	12.2%	616.5	14.4%	1,350.9	25.7%	2,372.6	30.9%	4,617.0	40.0%	2,672.1	28.1%	3,222.4	34.1%
Valores negociables	0.0	0.0%	0.0	0.0%	0.0	0.0%	52.8	0.7%	154.8	1.3%	287.6	3.0%	304.0	3.2%
<b>CUENTAS POR COBRAR</b>														
Socios del CATIE	446.5	10.7%	322.9	7.5%	274.6	5.2%	408.4	5.3%	618.9	5.4%	817.8	8.6%	789.2	8.3%
IICA	3.8	0.1%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%
Comerciales	68.8	1.6%	229.5	5.3%	65.4	1.2%	115.3	1.5%	65.4	0.6%	65.4	0.7%	0.0	0.0%
Otros	177.1	4.2%	375.4	8.7%	367.1	7.0%	431.6	5.6%	716.0	6.2%	691.6	7.3%	618.7	6.5%
Total Ctas. por Cobrar	696.2	16.7%	927.8	21.6%	707.1	13.5%	955.3	12.5%	1,400.3	12.1%	1,574.8	16.6%	1,407.9	14.9%
Otros activos	0.0	0.0%	0.0	0.0%	6.6	0.1%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%
Inventarios	583.9	14.0%	424.7	9.9%	377.5	7.2%	436.0	5.7%	411.4	3.6%	390.8	4.1%	406.6	4.3%
Activo Fijo	2,064.4	49.5%	2,102.5	49.0%	2,214.0	42.2%	3,362.7	43.8%	3,415.1	29.6%	3,432.9	36.2%	3,399.4	35.9%
<b>FONDOS ESPECIALES</b>														
Convenios y contrato	320.6	7.7%	221.9	5.2%	595.8	11.3%	286.4	3.7%	1,333.5	11.6%	878.2	9.3%	483.7	5.1%
Otros		0.0%		0.0%		0.0%	204.9	2.7%	198.9	1.7%	257.3	2.7%	233.1	2.5%
Total Activo	4,172.1	100.0%	4,293.4	100.0%	5,251.9	100.0%	7,670.7	100.0%	11,531.0	100.0%	9,493.7	100.0%	9,457.1	100.0%
<b>PASIVO</b>														
Cuentas por pagar	465.0	11.1%	1,143.5	26.6%	1,124.1	21.4%	1,194.5	15.6%	1,650.5	14.3%	1,665.2	17.5%	1,140.6	12.1%
Reservas	1,263.1	30.3%	1,135.2	26.4%	1,461.6	27.8%	1,806.4	23.5%	4,895.2	42.5%	2,045.9	21.6%	2,199.8	23.3%
Fondos especiales	1,094.9	26.2%	531.0	12.4%	921.9	17.6%	1,796.2	23.4%	1,915.5	16.6%	2,615.1	27.5%	2,306.4	24.4%
Saldo del Fondo	1,349.1	32.3%	1,483.7	34.6%	1,744.2	33.2%	2,873.6	37.5%	3,069.8	26.6%	3,167.5	33.4%	3,810.3	40.3%
Total Pasivo	4,172.1	100.0%	4,293.4	100.0%	5,251.8	100.0%	7,670.7	100.0%	11,531.0	100.0%	9,493.7	100.0%	9,457.1	100.0%
Ingresos	4,456.7		4,075.0		4,027.2		4,091.0		4,384.7		4,026.5		4,477.1	
Egresos	4,424.5		4,056.1		3,772.8		4,109.2		4,263.5		3,890.8		3,910.9	
Saldo	32.2		18.9		254.4		(18.2)		121.2		135.7		566.2	

Fuente: Estados Financieros Auditados del CATIE

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ANNEX 3

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**CATIE MEMBER QUOTAS**

CENTRO AGRONÓMICO TROPICAL DE INVESTIGACION Y ENSEÑANZA

CUOTAS DE LOS PAISES  
( SUMAS EXPRESADAS EN USDOLARES )

AL 30 DE SETIEMBRE DE 1992

3-1

PAIS	Cuota Anual	Saldo Al 31-12-91	Total Adeudado a la fecha	Recibido Periodos Anteriores	Recibido Periodo Actual	Total Recibido	Saldo Periodos Anteriores	Saldo Periodo Actual	Total por Cobrar	Fecha Ultimo pago	Importe Ultimo pago
IICA	1,222,300		1,222,300	0	400,000	400,000	0	822,300	822,300	31-08-92	60,000
COSTA RICA	50,000	158,333	208,333	0	24,769	24,769	158,333	25,231	183,564	24-09-92	8,129
EL SALVADOR	50,000	50,000	100,000	50,000	50,000	100,000	0	0	0	23-07-92	100,000
GUATEMALA	50,000	63,646	113,646	0	25,763	25,763	63,646	24,237	87,882	30-09-92	25,763
HONDURAS	50,000	0	50,000	0	50,000	50,000	0	0	0	06-05-92	50,000
NICARAGUA	50,000	239,400	289,400	0	0	0	239,400	50,000	289,400	05-09-91	107,848
PANAMA	50,000	180,000	230,000	0	0	0	180,000	50,000	230,000	13-08-91	25,000
REP. DOMINICA	50,000	199,986	249,986	0	0	0	199,986	50,000	249,986	13-09-89	50,000
MEXICO	50,000	0	50,000	0	25,000	25,000	0	25,000	25,000	30-09-92	25,000
<b>TOTAL</b>	<b>1,572,300</b>	<b>891,365</b>	<b>2,463,665</b>	<b>50,000</b>	<b>550,532</b>	<b>600,532</b>	<b>841,365</b>	<b>1,021,768</b>	<b>1,863,132</b>		<b>426,741</b>

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2.2.1

ANNEX 4

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**AUDITOR'S REPORT ON CATIE OVERHEAD RATES**

*and Panama*

TROPICAL AGRONOMIC CENTER FOR RESEARCH AND EDUCATION

ROCAP/GUATEMALA PROJECTS

CATIE'S OVERHEAD RATES

INDEPENDENT AUDITOR'S REPORT

We were engaged to perform a financial related audit of the overhead rates of the Tropical Agronomic Center for Research and Education (Centro Agronomico Tropical de Investigacion y Enseñanza - CATIE) related to the Regional Office for Central American Programs in Guatemala (ROCAP/Guatemala Projects) for the years ended December 31, 1986, 1987, 1988 and 1989. The purpose of our examination was to determine overhead rates and related methodology for these projects. Our work was performed in accordance with applicable guidelines included in OMB Circular A-122 (Cost Principles for Nonprofit Organizations), OMB Circular A-110 (Grants and Agreements with Institutions of Higher Education, Hospitals and Other Nonprofit Organizations), agreements between ROCAP/Guatemala and CATIE, Mandatory Standard Provisions and the United States Comptroller General's "Government Auditing Standards" (1988 Revision). Pursuant to the statement of work for this audit, we applied the principles and allocation methods contained in OMB Circular A-122 to calculate overhead rates based on allowable direct and indirect costs using the following selected distribution bases for allocating overhead costs: a) direct costs (net of capital expenditures) and b) total salaries.

A-133  
1/90

Based on the results of our work we believe that the multiple allocation method, with a direct cost (net of capital expenditures) distribution base, provides an appropriate methodology for calculating overhead rates applicable to CATIE's ROCAP/Guatemala projects.

*why?*

Our work disclosed that direct costs incurred by CATIE related to its educational and training activities are not completely recorded in individual cost centers different from those related to research activities and therefore a significant portion of CATIE's direct costs related to educational activities are recorded within cost centers related to research activities. This condition affects determination of overhead rates for each major function of CATIE.

CATIE's accounting records do not provide sufficient evidence to support the contribution of the counterpart funds stipulated in the respective agreements. Under the terms of the respective

*Why?  
Are they  
incomplete  
or  
in error?  
124*

Key

DRAFT

agreements, CATIE agreed to provide counterpart funds totaling \$18,857,000. We were unable to determine the amount of such funds provided by CATIE or their classification as indirect and/or direct costs. The amount and classification of the counterpart funds has a material effect on the determination of final overhead rates of the Tropical Agronomic Center for Research and Education, ROCAP/Guatemala Projects.

why?

Key issue!

why?

Because we were not able to apply adequate auditing procedures to satisfy ourselves regarding the contribution of counterpart funds, the scope of our work was not sufficient to enable us to determine final overhead rates of the Tropical Agronomic Center for Research and Education, ROCAP/Guatemala Projects for the years ended December 31, 1986, 1987, 1988 and 1989.

The following memorandum describes in detail the underlying assumptions used to determine the appropriate methodology for determining overhead rates applicable to CATIE's ROCAP/Guatemala projects.

Mike Santellanes Aguilera

April 22, 1991

EXEMPT FROM STAMP TAX - LAW NO. 6663

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2. Executive offices -

These costs were allocated based upon the estimated degree of efforts devoted by CATIE's upper management to the educational and research activities of the Center, as estimated by CATIE's Deputy Director.

3. General and administrative -

These costs were allocated based upon the estimated percentages by which these costs benefits major functions, as determined by CATIE's personnel.

4. Support activities -

These costs were allocated based upon total budgeted costs of each major function of CATIE.

5. Department of Education -

These costs were allocated based upon the estimated degree of efforts devoted to the educational activities and its relationship with research activities (institutional coordination), as determined by the Deputy Director of Education.

6. Department of Research -

These costs were allocated based upon the estimated degree of efforts devoted to the research activities and its relationship with educational activities (institutional coordination) as determined by the Deputy Director of Research. Furthermore, costs allocated to research activities were then distributed to CATIE's major research programs based again on percentages estimated by CATIE's personnel.

OVERHEAD ALLOCATION METHODS AND RESULTS

Our statement of work for this audit required that we distribute CATIE's overhead costs to major functions using the following allocation methods suggested by OMB Circular A-122.

1. Simplified allocation method - Under this method, the total costs of the organization are separated into direct and indirect costs and then total allowable indirect costs are allocated to direct costs using a selected distribution base. This method is appropriate whenever an organization's indirect costs benefits the major functions approximately in the same degree.

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2. Multiple allocation method - This method is recommended when an organization's indirect costs benefits the major functions in different degrees. Under this method, indirect costs are accumulated into cost groupings and then allocated individually to benefiting function using a selected distribution base.
3. Direct allocation method - Under this method an organization's indirect costs consist exclusively of general and administrative expenses, which are prorated individually to each direct cost category using a base most appropriate to the particular cost being prorated.

Of the above mentioned allocation methods, we believe that the simplified allocation method and the direct allocation method are not applicable for purposes of allocating CATIE's overhead because of the following:

- CATIE's indirect costs benefits its major functions in different degrees and therefore the simplified allocation method is not appropriate for allocation of CATIE's overhead.
- Indirect costs of CATIE are not composed only of general and administrative costs. Rather, they include additional and different indirect costs categories related to CATIE's research and education activities. This condition impedes the application of the direct allocation method.

Accordingly, considering the nature of CATIE's major functions and its indirect costs, we concluded that the multiple allocation method, is the only method applicable for purposes of allocating CATIE's indirect costs.

In addition, as recommended by OMB Circular A-122 and for practical purposes we selected the following two distribution bases for allocation of indirect costs of CATIE for each ROCAP/Guatemala project as follows:

1. Total direct costs - Includes total direct costs for each major function, excluding capital expenditures and other distorting items.
2. Total personnel costs - Includes direct costs for salaries, wages, payroll taxes and benefits for each major functions.

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*and Annex*

We were engaged to perform a financial related audit of the overhead rates of the Tropical Agronomic Center for Research and Education (Centro Agronómico Tropical de Investigación y Enseñanza - CATIE) related to the Regional Office for Central American Programs in Guatemala (ROCAP/Guatemala Projects) for the years ended December 31, 1986, 1987, 1988 and 1989. The purpose of our examination was to determine overhead rates and related methodology for these projects.

Based on our analysis of the overhead rates and of their standard deviation resulting from the application of the above mentioned allocation method and distribution bases, we conclude that the "multiple allocation method" with a total direct costs (net of capital expenditures) distribution base, is the basis that produces a relatively stable and uncomplicated method for determining overhead.

Application of this methodology resulted in the following overhead rates for years ended December 31, 1986, 1987, 1988 and 1989, with respect to ROCAP/Guatemala projects using CATIE's proposed direct and indirect costs less questionable costs:

*An Example on the basis of existing data*

Major function	Overhead rates				Weighted average rate
	1986	1987	1988	1989	
- Integral management of natural resources	58.8	60.1	43.7	76.7	59.8
- Improvement of tropical cultivations	36.6	33.7	35.0	36.0	35.3
- Production and sustained agroindustry development	45.7	36.6	43.6	29.6	38.9
- Education and training	98.8	54.0	67.6	62.6	70.7
- Other activities	36.6	29.1	35.1	36.0	34.2
- Overall rate for the year	57.9	44.4	48.5	44.2	48.8

*multiple*

*Weighting to expenditures*

*Simplified Allocation method*

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ANNEX 5

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**LETTER CONCERNING EXCHANGE RATE CALCULATION**



26 de octubre de 1992  
181-92

Señor  
Ing. Alvaro Jaikel, Director Administración y Finanzas  
CENTRO AGRONÓMICO TROPICAL DE  
INVESTIGACIÓN Y ENSEÑANZA  
Presente

Estimado señor:

Esta carta es en atención a su consulta referente a la metodología para calcular el cambio de moneda de las transacciones de tal forma que cumpla con los requerimientos del AID y ROCAP y que sea de fácil aplicación al Sistema Integrado de Información Financiera (SIIF).

El actual procedimiento utilizado por el CATIE consiste en registrar las transacciones con base en el tipo de cambio promedio del mes anterior.

De acuerdo a lo expresado en el punto #2 inciso a, del anexo remitido por ustedes a la carta numerada DAF/392, el procedimiento que debe seguirse para el registro de los gastos es:

"Los gastos en moneda local deberán ser cargados al proyecto ROCAP/Guatemala usando el tipo de cambio de la fecha del desembolso"

Con el fin de cumplir con los requisitos establecidos por el AID y ROCAP/Guatemala, los gastos deben cargarse en las cuentas del proyecto usando el tipo de cambio de los desembolsos. El sistema práctico que debe seguirse, es registrar los gastos usando el tipo de cambio bajo una base PEPS de acuerdo con los desembolsos de efectivo recibidos. El sistema PEPS (primeros en entrar, primeros en salir) implica que los gastos deben computarse a los tipos de cambios de los primeros desembolsos.

El procedimiento a seguir sería el siguiente:

Supongamos que el 31 de diciembre de 1991 la Institución recibió fondos por un monto de US\$40.000 al tipo de cambio de 2136.75 por dólar. Posteriormente, el 30 de enero de 1992 ingresaron US\$10.000 al tipo de cambio de 2133.75. Por último, se recibieron US\$8.000 al tipo de cambio de 2135.00 el 27 de abril de 1992.

De enero a marzo de 1992 se efectuaron las siguientes adquisiciones en moneda local:

28-01-92	Compra de equipo de cómputo	2.173.496
30-03-92	Compra de mobiliario y equipo	2.300.000

El procedimiento sobre una base PEPS, consiste en liquidar las primeras compras en moneda local, al tipo de cambio de los desembolsos que ingresaron de primero, y las compras en moneda local posteriores liquidarlas a los tipos de cambio de los siguientes desembolsos.

El detalle de la conversión a dólares de estos desembolsos sería el siguiente:

	COMPRAS COLOMB	DESBOLSOS COLOMB	VALOR COLOMB	TIPO DE CAMBIO	COMPRAS DOLARES	DESBOLSOS DOLARES	VALOR DOLARES
31-12-91	Desembolso inicial		5.470.000	2136.75		US\$ 40.000	US\$ 40.000
28-01-92	Compra del equipo cómputo	(4.173.496)	1.296.504	136.75	US\$ (30.519)	9.481	
30-01-92	Segundo desembolso		1.337.900	133.75		10.000	19.481
30-03-92	Compra mobiliario equipo	(2.300.000)	334.004	136.75	( 9.481)		10.000
				133.75	( 7.508)		2.187
27-04-92	Tercer desembolso		1.414.000	135.00		8.000	10.499

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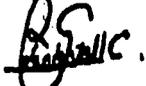
Desde el punto de vista de las regulaciones AID, con este procedimiento se estaría cumpliendo con sus políticas de conversión a dólares de los desembolsos en moneda local. Sin embargo, para efectos contables, en el caso que nos ocupa suponiendo un tipo de cambio de registro de abril de  $\$135.00$ , el saldo de la cuenta de efectivo en dólares estaría sobrevaluado en  $\$23$ , lo que contablemente debería ser ajustado de alguna manera. Lo que la entidad podría hacer, es manejar contra cuentas a nivel de totales, tanto en efectivo como en las partidas de egresos, donde registre la diferencia de cambio resultante en cada mes. Con lo anterior, se tendría la información que se necesita para efectos de AID o ROCAP/Guatemala y los saldos a nivel de totales de las cuentas coincidiría con las políticas de la entidad.

Como usted puede observar, este es un bosquejo general del concepto que nosotros recomendaríamos a ustedes para solucionar el problema en que se encuentran. Los detalles para implantar el sistema tendrían que ser estudiados con mayor amplitud.

Estaremos gustosos en aclarar cualquier duda que se le presente, así como ayudarles a implementar lo aquí expuesto, si así ustedes lo desean.

Atentamente,

DELOITTE & TOUCHE



Lic Rolando Guell Camacho  
Socio de Auditoría

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**ANNEX 6**

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**AUDIT OF COLON FUND**

150/1992

RECEIVED  
OCT 20 1992  
MOCAP

**CENTRO AGRONOMICO TROPICAL DE INVESTIGACION  
Y ENSEÑANZA (CATIE)**

**AUDIT OF  
AGREEMENT N°596-0129-00G-5082-00  
REGIONAL PROJECT FOR POST GRADUATE EDUCATION  
AND TRAINING (Colon Fund)**

**For the period from March 27, 1985 through June 30, 1992**

**15 OCT. 1992**

**USAID/Costa Rica**

CENTRO AGRONOMICO TROPICAL DE INVESTIGACION  
Y ENSEÑANZA (CATIE)

AUDIT OF  
AGREEMENT N°596-0129-00G-5082-00  
REGIONAL PROJECT FOR POST GRADUATE EDUCATION  
AND TRAINING (Colon Fund)

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September 28, 1992

Dr. Rubén Guevara, General Director  
Centro Agronómico Tropical de Investigación  
y Enseñanza (CATIE)  
San José, Costa Rica

Dear Dr. Guevara:

This report presents the results of the audit of the fund accountability statement of Agreement N° 596-0129-00G-5082-00 "Regional Project for Post Graduate Education and Training" (Colon Fund), USAID, managed by Centro Agronómico Tropical de Investigación y Enseñanza (CATIE), for the period from March 27, 1985 through June 30, 1992.

## BACKGROUND

Agreement N° 596-0129-00G-5082-00 "Regional Project for Post Graduate Education and Training" (Colon Fund), between Centro Agronómico Tropical de Investigación y Enseñanza (CATIE) and United States Agency for International Development (USAID), was signed August 19, 1985.

The purpose of such Agreement is to help produce a base of professionals with practical experience and adequate education to face the agricultural production deficiencies within Central America and Panama. The essential elements to achieve this goal is through personnel training and expansion of CATIE's current installations, to accommodate the growth in students, professors and personnel as well as amplifying the number of educational and institutional programs.

Dr. Rubén Guevara, General Director

- 2-

September 28, 1992

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Personnel training will consist in developing a permanent academic structure within CATIE, to supply stability and continuity of personnel, improve the quality of teaching, graduates' distinction and professional training programs of CATIE.

Physical additions will include construction of student and teacher housing, a building which will house classrooms, administrative offices and a computer center. Likewise, technical assistance is also provided for development of a long-term plan for maintenance and facilities.

As indicated in the original Agreement, total project cost was estimated at the equivalent to \$22,134,000, funded as follows:

- A \$7,000,000 contribution in dollars from the Regional Office for Central America and Panama Programs (ROCAP) of United States Agency for International Development (USAID) (U.S. Dollar Voucher).
- A \$6,481,000 contribution in colones from USAID/Costa Rica through special fund AID-FEDECOOP/Corporación de Financiamiento Industrial, S. A. (Colon Voucher)
- Commitment from CATIE for \$8,653,000 of goods and services. Such contribution corresponds only to the Agreement's dollar fund.

Nevertheless and according to Agreement terms, CATIE Management contends that the contribution value (Colon fund), excluding above-mentioned CATIE commitment, shall include funds earned by the Special Fund AID-FEDECOOP/Corporación de Financiamiento Industrial S. A., which is estimated to reach \$10,000,000 upon expiration in May 1993.

Dr. Rubén Guevara, General Director

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September 28, 1992

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## AUDIT OBJECTIVES AND SCOPE

We conducted our audit in accordance with generally accepted auditing standards and Government Auditing Standards (1988 Revision) issued by the Comptroller General of the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the fund accountability statement. An audit also includes assessing the accounting principles used and significant estimates made by CATIE, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

The scope is that of a financial audit, which audit objectives were to determine whether:

- The fund accountability statement presents fairly , in all material respects, the funds received and disbursements incurred in the execution of the Regional Project for Post Graduate Education and Training (Colon Fund), for the period from March 27, 1985 through June 30, 1992.
- The internal control structure implemented by CATIE is adequate to manage the Project's operations, including verifying that (a) CATIE has applied, in all material respects and under the circumstances, reasonable business practices to ensure the most effective use of funds provided under the Agreement; (b) CATIE prepares monthly bank reconciliations; (c) funds included in the Agreement's accounting records, as contributions received, agree with confirmations received from COFISA.

Dr. Rubén Guevara, General Director

- 4 -

September 28, 1992

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Compliance with this objective is limited to the consideration of such internal control structure in order to determine our auditing procedures for the purpose of expressing an opinion on the fund accountability statement and not to provide assurance on the internal control structure.

- CATIE has complied, in all material respects, with Agreement terms and with applicable laws and regulations. This includes a determination of possible questionable costs, if any. In accordance with applicable USAID regulations a questionable cost is one that is explicitly ineligible because it is not project related, unreasonable or prohibited by the agreement or applicable laws and regulations; likewise, costs are considered questionable if they do not have supporting documentation or are not properly authorized.

#### AUDIT RESULTS

- Fund Accountability Statement

*According to the financial statements of the Colon Fund,*

In our opinion, the fund accountability statement presents fairly, in all material respects, the funds received and disbursements incurred in the execution of the Regional Project for Post Graduate Education and Training (Colon Fund) for the period from March 27, 1985 through June 30, 1992.

The original Agreement budget is required to be included as part of the above-mentioned fund accountability statement. However, such budget is not included within that fund accountability statement because the original Agreement is unclear on how to modify budgeted amounts for an increase in expected earnings generated by the Special Fund AID-FEDECOOP/Corporación de Financiamiento Industrial S. A.

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Dr. Rubén Guevara, General Director

- 5 -

September 28, 1992

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• Internal Control Structure

In planning and performing our audit of Regional Project for Post Graduate Education and Training (Colon Fund), we considered its internal control structure in order to determine our auditing procedures for the purpose of expressing an opinion on the fund accountability statement and not to provide assurance on the internal control structure. Our consideration of the internal control structure did not disclose any condition which may be considered a reportable condition.

Likewise, based on the consideration of the internal control structure implemented by CATIE, we concluded that: (a) for transactions tested, the Center had applied, in all material respects and under the circumstances, reasonable business practices to ensure the most effective use of funds provided under the Agreement; (b) CATIE controls funds received adequately, through the use of an independent bank account which is reconciled monthly with bank statements; (c) that funds booked in Project's accounting records as of June 30, 1992, as contributions received, agree with confirmations received from Corporación de Financiamiento Industrial, S. A. (COFISA).

Dr. Rubén Guevara, General Director

- 6 -

September 28, 1992

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- Compliance with Applicable Laws, Regulations and Agreement Terms

A representative sample of transactions was tested to verify compliance with applicable laws, regulations and Agreement terms.

The results of our tests indicate that, with respect to items tested, CATIE had complied, in all material respects, with the provisions of applicable laws and regulations and Agreement terms. With respect to items not tested, nothing came to our attention that caused us to believe that CATIE had not complied, in all material respects, with those provisions. Also, no questionable costs (as previously defined) were determined as having been charged to the Agreement.

MANAGEMENT'S COMMENTS

DR. Rubén Guevara, General Director

- 7 -

September 28, 1992

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\* \* \* \* \*

This report is intended for the information of Centro Agronómico Tropical de Investigación y Enseñanzas (CATIE) and United States Agency for International Development (USAID/Costa Rica). This restriction is not intended to limit distribution of this report, which is a matter of public record.

CENTRO AGRONOMICO TROPICAL DE INVESTIGACION  
Y ENSEÑANZA (CATIE)

USAID AGREEMENT Nº596-0129-00G-5082-00  
REGIONAL PROJECT FOR POST GRADUATE EDUCATION  
AND TRAINING (Colon Fund)

REPORT ON FUND ACCOUNTABILITY STATEMENT

Independent Auditors' Report

General Directorate  
Centro Agronómica Tropical  
de Investigación y Enseñanza  
Turrialba - Costa Rica

We have audited the accompanying fund accountability statement of Regional Project for Post Graduate Education and Training (Colon Fund), USAID, managed by Centro Agronómico Tropical de Investigación y Enseñanza (CATIE), for the period from March 27, 1985 through June 30, 1992. That fund accountability statement is the responsibility of CATIE's management. Our responsibility is to express an opinion on the fund accountability statement based on our audit.

We conducted our audit in accordance with generally accepted auditing standards and Government Auditing Standards (1988 Revision) issued by the Comptroller General of the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the fund accountability statement is free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the fund accountability statement. An audit also includes assessing the accounting procedures used and significant estimates made by CATIE's management, as well as evaluating the overall presentation of the fund accountability statement. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the fund accountability statement referred to above presents fairly, in all material respects, funds received and disbursements incurred in the execution of Regional Project for Post Graduate Education and Training (Colon Fund), managed by Centro Agronómico Tropical de Investigación y Enseñanza (CATIE), for the period from March 27, 1985 through June 30, 1992 in conformity with generally accepted accounting principles.

As discussed in note 4, the above-mentioned fund accountability statement should include the original Agreement budget in order to allow comparison with execution. However, according to CATIE's Management such budget is not included due to the lack of clearly defined budgetary modifications necessary to account for the increase in expected earnings from the Special Fund AID-FEDECOOP/Corporación de Financiamiento Industrial S. A.

This report is intended for the information of Centro Agronómico Tropical de Investigación y Enseñanzas (CATIE) and United States Agency for International Development (USAID/Costa Rica). This restriction is not intended to limit distribution of this report, which is a matter of public record.

September 25, 1992

CENTRO AGRONOMICO TROPICAL DE INVESTIGACION  
Y ENSEÑANZA (CATIE)

USAID AGREEMENT N°596-0129-00G-5082-00  
REGIONAL PROJECT FOR POST GRADUATE EDUCATION  
AND TRAINING (Colon Fund)

Fund Accountability Statement

(Colon Fund)

for the period from March 27, 1985 through June 30, 1992

Income from contributions (note 3)	\$ <u>7,484,079</u>
Disbursements:	
Salaries	810,656
Installations and equipment	6,439,174
Travel and travel allowances	31,136
Communications and printing	17,917
Maintenance	<u>26,081</u>
	<u>7,324,964</u>
Foreign exchange losses (note 2)	<u>75,560</u>
Excess of income over disbursements	\$ <u><u>83,555</u></u>

See accompanying notes to fund accountability statement.

CENTRO AGRONOMICO TROPICAL DE INVESTIGACION  
Y ENSEÑANZA (CATIE)

USAID AGREEMENT N°596-0129-00G-5082-00  
REGIONAL PROJECT FOR POST GRADUATE EDUCATION  
AND TRAINING (Colon Fund)

Notes to Fund Accountability Statement

For the eight-year period ended June 30, 1992

(1) Nature of Agreement

Agreement N° 596-0129-00G-5082-00 "Regional Project for Post Graduate Education and Training" (Colon Fund), between Centro Agronómico Tropical de Investigación y Enseñanza (CATIE) and United States Agency for International Development (USAID), was signed August 19, 1985.

The purpose of such Agreement is to help produce a base of professionals with practical experience and adequate education to face the agricultural production deficiencies within Central America and Panama.

The essential elements to achieve this goal is through personnel training and expansion of CATIE's current installations to accommodate the growth in students, professors and personnel as well as amplifying the number of educational and institutional programs.

Total project cost was estimated at equivalent to \$22,134,000, funded as follows:

- A \$7,000,000 contribution in dollars from the Regional Office for Central America and Panama Programs (ROCAP) of United States Agency for International Development (USAID).
- A \$6,481,000 contribution in colones from USAID/Costa Rica through special fund AID-FEDECOP/Corporación de Financiamiento Industrial, S. A.
- Commitment from CATIE for \$8,653,000 of goods and services.

(Continued)

CENTRO AGRONOMICO TROPICAL DE INVESTIGACION  
Y ENSEÑANZA (CATIE)

USAID AGREEMENT Nº596-0129-00G-5082-00  
REGIONAL PROJECT FOR POST GRADUATE EDUCATION  
AND TRAINING (Colon Fund)

Notes to Fund Accountability Statement

However, according to the Agreement (Colon fund), CATIE Management has considered that the cost of the project should include funds earned by the Special Fund AID-FEDECOOP/Corporación de Financiamiento Industrial S. A, which by May 1993 is expected to reach \$10,000,000.

(2) Accounting Records

CATIE is responsible for recording transactions and maintaining the accounting records related to the Agreement.

The accounting records are maintained in dollars of the United States of America (U.S. dollars)

Contributions received and disbursements incurred (both in colones) are translated to US dollars using the exchange rates prevailing on the date the transactions are made. Such translation has produced a loss of \$75,560, which is included in the fund accountability statement

(3) Income from Contributions

Income is received through Corporación Costarricense de Financiamiento Industrial, S. A. (COFISA), from interest generated by from the Special Trust Fund signed between United States Agency for International Development (USAID) and Federación de Cooperativas de Caficultores R. L. (FEDECOOP), managed by COFISA.

(Continued)

for:  
• market, or  
• CATIE ?

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CENTRO AGRONOMICO TROPICAL DE INVESTIGACION  
Y ENSEÑANZA (CATIE)

USAID AGREEMENT N°596-0129-00G-5082-00  
REGIONAL PROJECT FOR POST GRADUATE EDUCATION  
AND TRAINING (Colon Fund)

Notes to Fund Accountability Statement

(4) Centro Agronómico Tropical de Investigación y Enseñanza (CATIE)  
Contribution

Such budget (Colon fund) was defined in the original Agreement. However, the expected earnings from the Special Fund AID-FEDECOOP/Corporación de Financiamiento Industrial S. A have been assessed at \$10,000,000. Also, the original budget is inaccurate because no clearly defined budgetary modifications have been established to account for this increase. Therefore, budgeted amounts have not been included in the fund accountability statement (Colon fund).

CENTRO AGRONOMICO TROPICAL DE INVESTIGACION  
Y ENSEÑANZA (CATIE)

USAID AGREEMENT N°596-0129-00G-5082-00  
REGIONAL PROJECT FOR POST GRADUATE EDUCATION  
AND TRAINING (Colon Fund)

REPORT ON INTERNAL CONTROL STRUCTURE

Independent Auditors' Report

General Directorate  
Centro Agronómica Tropical  
de Investigación y Enseñanza  
Turrialba - Costa Rica

We have audited the accompanying fund accountability statement of Regional Project for Post Graduate Education and Training (Colon Fund), managed by Centro Agronómico Tropical de Investigación y Enseñanza (CATIE), for the period from March 27, 1985 through June 30, 1992 and have issued our unqualified report thereon dated September 25, 1992.

We conducted our audit of the fund accountability statement in accordance with generally accepted auditing standards and Government Auditing Standards (1988 Revision) issued by the Comptroller General of the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the fund accountability statement is free of material misstatement.

In planning and performing our audit of the fund accountability statement Regional Project for Post Graduate Education and Training (Colon Fund), we considered the existing internal control structure in order to determine our auditing procedures for the purpose of expressing an opinion on the fund accountability statement and not to provide assurance on the internal control structure implemented by CATIE.

CATIE's management is responsible for establishing and maintaining an internal control structure. In fulfilling this responsibility, estimates and judgments by management are required to assess the expected benefits and related costs of internal control structure policies and procedures. The objectives of an internal control structure are to provide management with reasonable, but not absolute, assurance that assets are safeguarded against loss from unauthorized use or disposition, and that transactions are executed in accordance with CATIE's authorization and recorded properly to permit the preparation of the fund accountability statement in accordance with generally accepted accounting principles.

Because of inherent limitations in any internal control structure, errors or irregularities may nevertheless occur and not be detected. Also, projection of any evaluation of the internal control structure to future periods is subject to the risk that procedures may become inadequate because of changes in conditions or that effectiveness of design and operation of policies and procedures may deteriorate.

For the purposes of this report, we have classified the significant policies and procedures of the internal control structure into the following categories:

- Keeping over accounting records.
- Control over cash balances.
- Control over disbursements.

For all internal control structure categories listed above, we obtained an understanding of the design of relevant policies and procedures and whether they were put into operation, and we assessed control risk.

Our consideration of the internal control structure would not necessarily disclose all matters in the internal control structure that might be material weakness under standards established by the American Institute of Certified Public Accountants. A material weakness is a reportable condition in which the design or operation of one or more of the specific internal control structure elements does not reduce to a relatively low level the risk that errors or irregularities in amounts that would be material in relation to the fund accountability statement being audited may occur and not be detected within a timely period by employees in the normal course of performing their assigned functions. We noted no matters involving the internal control structure and its operation that we considered to be material weaknesses as defined above.

This report is intended for the information of Centro Agronómico Tropical de Investigación y Enseñanzas (CATIE) and United States Agency for International Development (USAID/Costa Rica). This restriction is not intended to limit distribution of this report, which is a matter of public record.

September 25, 1992

**CENTRO AGRONOMICO TROPICAL DE INVESTIGACION  
Y ENSEÑANZA (CATIE)**

**USAID AGREEMENT N°596-0129-00G-5082-00  
REGIONAL PROJECT FOR POST GRADUATE EDUCATION  
AND TRAINING (Colon Fund)**

**REPORT ON COMPLIANCE WITH AGREEMENT TERMS AND  
APPLICABLE LAWS AND REGULATIONS**

**Independent Auditors' Report**

We have audited the accompanying fund accountability statement Regional Project for Post Graduate Education and Training (Colon Fund), managed by Centro Agronómico Tropical de Investigación y Enseñanza (CATIE), for the period from March 27, 1985 through June 30, 1992 and have issued our unqualified report thereon dated September 25, 1992.

We conducted our audit of the fund accountability statement in accordance with generally accepted auditing standards and Government Auditing Standards (1988 Revision) issued by the Comptroller General of the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the fund accountability statement is free of material misstatement.

Compliance with Agreement terms and laws and regulations applicable to Regional Project for Post Graduate Education and Training (Colon Fund) is the responsibility of CATIE's management. As part of the process of obtaining reasonable assurance about whether the funds accountability statement is free of material misstatement, we performed tests of CATIE's compliance with certain provisions of Agreement terms and applicable tax and labor laws and regulations in Costa Rica. However, our objective was not to provide an opinion on overall compliance with such provisions.

The result of our tests indicate that, with respect to items tested, CATIE has complied, in all material respects, with the provisions referred to in the preceding paragraph. With respect to items not tested, nothing came to our attention that caused us to believe that CATIE had not complied, in all material respects, with those provisions.

This report is intended for the information of Centro Agronómico Tropical de Investigación y Enseñanzas (CATIE) and United States Agency for International Development (USAID/Costa Rica). This restriction is not intended to limit distribution of this report, which is a matter of public record.

September 25, 1992

**ANNEX 7**

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**CATIE RETIREMENT FUNDS PROPOSAL**

**CFNTRO AGONOMICO TROPICAL DE INVESTIGACION Y ENSEÑANZA,  
CATIE**

**DIRECCION DE ADMINISTRACION Y FINANZAS**

**PROPUESTA PARA COMPLETAR LOS APORTES INSTITUCIONALES A  
FONDOS DE RETIRO DEL PERSONAL PROFESIONAL PRINCIPAL Y AL  
FONDO DE CONTINGENCIA Y GARANTIA DEL PERSONAL NACIONAL**

**I-) ANTECEDENTES**

El Centro Agronómico Tropical de Investigación y Enseñanza, (CATIE), ha establecido por reglamento, diversos beneficios tanto al personal internacional como al nacional por medio de aportaciones al salario, las que pretenden servir como prestaciones salariales, una vez que los funcionarios se desvinculen del Centro.

Por motivos fundamentalmente financieros, el CATIE no ha podido dar contenido económico real a estas obligaciones, las que a la fecha alcanzan montos considerables.

El objetivo de esta propuesta es presentar algunas opciones o posibilidades de reconstituir ambos fondos en un plazo relativamente corto.

**II-) FONDO DE RETIRO DEL PERSONAL PROFESIONAL PRINCIPAL**

Dicho fondo está vigente desde el nacimiento de la Institución en el año 1973 y se nutre del porcentaje (alrededor del 5%) de los salarios que aporta tanto el Centro como los funcionarios, así como los intereses del 5% anual calculados mensualmente sobre los saldos.

A pesar de estar registrado el pasivo en libros, el Fondo no tuvo contenido económico alguno por casi 15 años, hasta que en 1987 se empezó a constituir monetariamente con los aportes de los proyectos financiados por la Oficina Regional para los Programas de Centro América (ROCAP), de la Agencia para el Desarrollo Internacional (AID). El esfuerzo continuó y a partir del año 1988 se deposita el aporte del resto de proyectos que lleva a cabo la Institución, mientras que los aportes del presupuesto de Planta Básica se emplean para cancelar los pasivos de los funcionarios que se desvinculan sin contenido, o con contenido parcial en el fondo de efectivo.

Al 30 de junio de 1992 el monto total del fondo asciende a la suma de \$ 1.8 millones (UN MILLON OCHOCIENTOS MIL DOLARES de los Estados Unidos de América), de los cuales \$ 731,000. (SETECIENTOS TREINTA Y UN MIL DOLARES se encuentran depositados (40%), mientras que \$1.07 millones (UN MILLON SETENTA MIL DOLARES) que equivalen a algo menos del 60% es la suma que debe reintegrarse. De continuarse en los próximos meses el programa de reconstitución del fondo, esperamos que para el final del presente año la suma a reintegrar se reduzca a cerca de \$ 900,000. (novecientos mil dólares).

### III-) FONDO DE CONTINGENCIA Y GARANTIA DEL PERSONAL NACIONAL

Conocido también como FOCOPEN, el fondo se creó el 1º. de enero de 1982 con el aporte Institucional del 3% sobre los salarios de todo el personal nacional.

El capital es manejado por una Junta que da créditos a los funcionarios asociados, práctica que ha disminuido por diversas razones de índole administrativa y financiera que enfrentó el Centro a mediados de la década de los ochenta, al no poder traspasar la totalidad del aporte y deducciones a la Junta.

Al 30 de junio de 1992, el CATIE mantiene pasivos registrados a favor del Fondo por un monto de ₡ 23.5 millones (ventitrés millones quinientos mil colones costarricenses) equivalentes a unos \$ 175,000. (ciento setenta y cinco mil dólares de los Estados Unidos de América).

### IV-) PROPUESTA PARA COMPLETAR LOS APORTES INSTITUCIONALES A AMBOS FONDOS

Consideramos que ambos fondos pueden reconstituirse, -sin menoscabo del esfuerzo que está realizando la Dirección General para apoyar el Programa de Posgrado-, con aportes de los presupuestos de Actividades Básicas y Productivas si el plazo para hacerlo fluctúa entre cinco y ocho años, ya que prácticamente la totalidad de dichos adeudos se encuentra invertido en la cuotas de membresía por cobrar a algunos países miembros.

Para tal efecto, sugerimos la combinación de las siguientes opciones:

- a-) Asignar a partir del año 1993, un porcentaje, por ejemplo del 5% de los presupuestos de Actividades Básicas y Productivas, a la reconstitución proporcional de ambos fondos.

- b-) Destinar a partir del próximo presupuesto anual, un porcentaje de por ejemplo 60% de las cuotas de periodos anteriores, adeudadas por los países miembros.
- c-) Dedicar un porcentaje, v.g. 20% de la diferencia retroactiva entre la tasa provisional por apoyo administrativo y logístico (overhead) y la tasa real que se aplique al proyecto Regional de Manejo de Recursos Naturales y el Medio Ambiente (RENARM) financiados por ROCAP.

Además, podrían hacerse aportes si se tuvieran ingresos mayores a los previstos, excedentes extraordinarios u otros conceptos semejantes, a criterio de la Dirección General.

Con las medidas anteriores creemos razonable lograr el objetivo de la propuesta sin afectar significativamente las actividades sustantivas del Centro.

**ANNEX 8**

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**1992 CATIE INTERNAL AUDIT**

## AUDITORIA INTERNA DEL C.A.T.I.E.

### PROGRAMA DE TRABAJO PARA EL AÑO 1992

#### INTRODUCCION:

La Unidad de Auditoria Interna tiene la funcion de velar por el cumplimiento de los Reglamentos, Acuerdos del Consejo Directivo, de la correcta aplicacion de las politicas administrativas y financieras de la Institucion, asi como formular las recomendaciones para la implementacion de nuevos procedimientos y politicas, para el fortalecimiento del control interno en las necesidades del caso.

#### A. OBJETIVOS GENERALES:

- 1- Evaluar el grado de eficiencia y eficacia de la Administracion, verificar control interno y uso de los recursos de la Institucion, así como determinar el cumplimiento de las disposiciones legales pertinentes.
- 2- Brindar asesoramiento a las diferentes areas de la Institucion con el fin de colaborar en el mejoramiento de los sistemas administrativos y contables, para lograr el mejor aprovechamiento de los recursos.

#### B. ACTIVIDADES:

DESCRIPCION	FECHA
1- Analisis de la eficiencia y eficacia de la Administracion del Club Internacional.	2 al 31 de enero.
2- Analisis y determinación de los activos del proyecto AFN/SAREC.	2 al 31 de enero.
3- Revisión del inventario de semovientes en general.	6 al 10 de enero.
4- Revisión y evaluación del Reglamento de Transportes	3 al 14 de febrero.
5- Revisión y analisis administrativo de la estacion experimental La Lola	3 al 14 de febrero.

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11- Análisis de la ejecución presupuestaria en el rubro de personal.	17 febrero al 13 marzo.
12- Revisión y estudio operacional de la producción lechera.	17 febrero al 20 marzo.
13- Seguimiento y análisis de las recomendaciones formuladas en el informe AI/01 de la lavandería.	16 al 20 de marzo.
14- Seguimiento de las recomendaciones emitidas en los informes de 1991.	23 marzo al 3 de abril.
15- Revisión y estudio de la unidad de producción de medios y fotocopiado.	23 de marzo al 15 abril.
16- Estudio y análisis administrativo del banco de semillas.	6 al 24 de abril.
17- Estudio y análisis de la unidad de servicios generales. (alojamiento y alimentación)	20 abril al 15 mayo.
18- estudio y análisis del proceso de contratación (licitaciones).	27 abril al 15 mayo.
19- Revisión y evaluación del cumplimiento del Reglamento de Cajas Chicas.	15 mayo al 30 junio.
20- Análisis de la razonabilidad de la cuenta de Caja y Bancos y Cuentas por Cobrar.	1 al 24 de julio.
21- Estudio y análisis de los proyectos financiados por AID/ROCAP.	27 julio al 18 setiembre.
22- Preparación de intervención en Guatemala	21-25 de setiembre.
23- Intervención fondos operativos de Proyecto MIP-Cuencas y Madeleña en Guatemala	28 de setiembre al 9 oct.
24- Revisión y estudio de los ingresos del área forestal.	13-23 de octubre
25- Análisis de la razonabilidad del gasto en el rubro de llamadas telefónicas.	13-23 de octubre.

**C- RECURSOS.**

Para el alcance de los objetivos supracitados, se cuenta con una

**D- IMPREVISTOS SOLICITUDES Y OTROS.**

Algunos días del año no han sido programados con tareas específicas debido a que fueron reservados para atender los imprevistos como demandas o solicitudes de trabajos específicos, así como para atender a las reuniones y las vacaciones correspondientes de cada uno de los funcionarios.

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**ANNEX 9**

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**CATIE INCOME PROJECTIONS**

CENTRO AMERICANO TEORICA DE INVESTIGACION + EMERGENCIA  
 PROMOCION DE INGRESOS PARA PLANTA BASICA + ACTIVIDADES PRODUCTIVAS PARA EL CAJON  
 Dólares Americanos

ACTIVIDADES	1992	1993	1994	1995	1996
<b>SECCION DEL CAJON</b>					
Cuota INCA	us\$ 1,025,318.00	1,271,200.00	1,271,200.00	1,271,200.00	1,271,200.00
Países Miembros	750,000.00	450,000.00	450,000.00	450,000.00	450,000.00
<b>SERVICIO DE APOYO TECNICO</b>					
Lab. y Analisis de Suelos	7,500.00	16,500.00	17,000.00	17,500.00	18,000.00
<b>ACTIVIDADES DOCENTES</b>					
Postgrado - Matriculas	225,000.00	351,250.00	400,000.00	400,000.00	400,000.00
Curso Corto y Entrenamiento	50,000.00	60,000.00	65,000.00	70,000.00	75,000.00
Consultorias CATIE	0.00	0.00	0.00	0.00	0.00
OVER-HEAD	977,518.00	1,051,957.00	1,090,000.00	1,090,000.00	850,000.00
<b>TOTAL PLANTA BASICA</b>	<b>us\$ 2,952,318.00</b>	<b>3,265,917.00</b>	<b>3,207,200.00</b>	<b>3,208,700.00</b>	<b>3,064,200.00</b>
<b>ACTIVIDADES PRODUCTIVAS</b>					
<b>ACTIVIDADES COMERCIALES</b>					
Fincas Cafe	us\$ 147,979.00	108,464.00	100,000.00	100,000.00	100,000.00
Finca Cafa	36,000.00	41,400.00	50,000.00	60,000.00	65,000.00
Centro de Consulta	130,000.00	152,500.00	177,900.00	207,600.00	218,200.00
Rec. Soc. y Prod. Medios	125,040.00	92,400.00	80,000.00	80,000.00	80,000.00
Residencias y Alojamiento	381,720.00	497,600.00	410,000.00	410,000.00	450,000.00
Alquiler de Vehiculo	181,000.00	190,000.00	190,000.00	190,000.00	190,000.00
Club Internacional	81,760.00	82,760.00	35,000.00	35,000.00	35,000.00
Cara Civil. Mantenimiento	70,000.00	50,000.00	50,000.00	50,000.00	50,000.00
Produccion Audiovisual	54,000.00	0.00	0.00	0.00	0.00
Lavadora Secadora	0	3,700.00	4,700.00	4,100.00	4,200.00
Productos Pecuarios	249,100.00	228,544.00	235,000.00	242,000.00	249,000.00
Finca Forestal	54,567.00	15,000.00	18,000.00	21,000.00	24,000.00
Ecol. Semillas Forestales	15,000.00	15,000.00	15,500.00	17,000.00	17,500.00
Corso Servicios Diversos	8,200.00	41,538.00	45,000.00	50,000.00	55,000.00
<b>TOTAL ACTIVIDADES PRODUCTIVAS</b>	<b>1,576,392.00</b>	<b>1,476,925.00</b>	<b>1,431,400.00</b>	<b>1,468,900.00</b>	<b>1,538,900.00</b>
<b>TOTAL PLANTA BASICA y ACT. PROD.</b>	<b>us\$ 4,528,710.00</b>	<b>4,742,842.00</b>	<b>4,638,600.00</b>	<b>4,677,600.00</b>	<b>4,603,100.00</b>

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ANNEX 10

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**CATIE EXPENSE PROJECTIONS**

CENTRO AGRONÓMICO TROPICAL DE INVESTIGACIÓN E INSEMINACIÓN  
 PREVISION DE GASTOS PARA PLANTA BÁSICA Y ACTIVIDADES PRODUCTIVAS PARA 5 AÑOS  
 (Dólares Americanos)

ACTIVIDADES	1992	1993	1994	1995	1996
DIRECCIONES SUPERIORES	us\$ 101,000.00	96,974.00	92,500.00	92,500.00	97,125.00
DIRECCIÓN GENERAL	718,552.00	751,792.00	750,750.00	770,000.00	770,000.00
PROGRAMAS DE APOYO	331,157.00	219,479.00	200,500.00	208,125.00	208,125.00
ADMINISTRACIÓN Y FINANZAS	907,194.00	1,244,951.00	1,157,175.00	1,174,750.00	1,174,750.00
PROGRAMAS TÉCNICOS	494,332.00	551,977.00	507,325.00	480,175.00	461,575.00
PROGRAMAS INTEGR. REC. NATURAL	212,579.00	352,402.00	343,125.00	308,995.25	268,945.75
PROGRAMA DE INSEMINACIÓN	58,905.00	435,405.00	404,225.00	404,225.00	404,225.00
APOYO INSTITUCIONAL	35,524.00	34,227.00	75,625.00	75,625.00	75,625.00
Provisor	351,525.00				
Subsejecución de Egresos		251,217.00			
Diferencia Cancelaria		124,095.00			
<b>TOTAL PLANTA BÁSICA</b>	<b>us\$ 2,332,319.00</b>	<b>3,098,345.00</b>	<b>2,947,725.75</b>	<b>2,920,395.00</b>	<b>2,963,066.75</b>
<b>ACTIVIDADES PRODUCTIVAS</b>					
<b>ADMINISTRACIÓN Y FINANZAS</b>					
Foncos	438,859.00	561,247.00	550,600.00	565,300.00	579,220.00
Residencias Alojamiento	180,628.00	187,240.00	168,250.00	175,700.00	185,500.00
Recor. Documentos	61,901.00	62,315.00	67,000.00	67,000.00	67,000.00
Alojamiento de vehículos	158,798.00	157,175.00	157,000.00	157,000.00	157,000.00
Club Internacional	79,064.00	69,975.00	10,000.00	10,000.00	10,000.00
Casa Civil: Mantenimiento	67,979.00	79,542.00	79,500.00	79,500.00	79,500.00
<b>AREA SILVICULTURA BOSQUES NATURALES</b>					
Soc. Lat. Semillas Forestales	8,888.00	14,259.00	14,500.00	14,500.00	14,500.00
<b>APOYO INSTITUCIONAL</b>					
Centro de Consulta	177,924.00	209,789.00	195,000.00	200,000.00	205,000.00
Producción de Audiovisual	50,745.00	27,500.00	19,250.00	21,200.00	22,200.00
Provisor	192,593.00		176,250.00	178,700.00	227,200.00
Subsejecución de Egresos		(107,142.00)			
Diferencia Cancelaria		(14,960.00)			
<b>TOTAL ACTIVIDADES PRODUCTIVAS</b>	<b>1,489,599.00</b>	<b>1,720,139.00</b>	<b>1,401,400.00</b>	<b>1,466,900.00</b>	<b>1,503,000.00</b>
<b>TOTAL PLANTA BÁSICA + ACT. PROD.</b>	<b>us\$ 4,321,907.00</b>	<b>4,818,484.00</b>	<b>4,349,125.75</b>	<b>4,387,295.00</b>	<b>4,466,066.75</b>

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**ANNEX 11**

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**1993 CATIE MAINTENANCE BUDGET**

Presupuesto de mantenimiento

CATIE  
UNIDAD DE PLANTA FISICA

PRESUPUESTO 1993

TC 137

OFICINA EJECUTORA		
PERSONAL	\$28,467	3,900,000.00
OPERACION	\$8,029	1,100,000.00
RENOVACION DE INSTALACIONES		
PERSONAL	\$26,277	3,600,000.00
OPERACION	\$43,796	6,000,000.00
ZONAS VERDES		
PERSONAL	\$12,044	1,650,000.00
OPERACION	\$21,898	3,000,000.00
OBRAS A REALIZAR		
RENOVACION ESTACION DE BOMBEO	\$7,299	1,000,000.00
OTRAS OBRAS A DEFINIR	\$65,110	8,920,000.00

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\$ 212 920.00 29,170,000.00

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ANNEX 12

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**CATIE ADMINISTRATIVE AND TEACHING COSTS AND EXPENDITURES**

CUADRO RESUMEN DEL COSTO DE POSGRADO

CONCEPTO	MONTO ANUAL
COSTO PROFESORES IMPARTIR CLASES	164,527
COSTO PROFESORES CONSEJEROS	11,869
COSTOS ADMINISTRATIVOS	178,854
COSTOS OPERATIVOS DE LA ESCUELA	80,150
COSTOS GERENCIALES	191,270
TOTALES	626,670

EL COSTO TOTAL DE LA MAESTRIA ESTIMADA EN 626,670 DOLARES ANUALES PRORRATEADA EN 90 ESTUDIANTES DE MAESTRIA NOS DA UN COSTO POR ESTUDIANTE DE 6963 DOLARES.

ASIGNACION PORCENTUAL DE LOS COSTOS DE GERENCIA

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DEPENDENCIA	COSTO TOTAL	PRORRATEO 17.25% ESCUELA POSGRADO
DIRECTRICES SUPERIORES	96934	16963
DIRECCION GENERAL	381382	66742
PROGRAMAS DE APOYO	91586	16028
ADMINISTRACION Y FINANZAS	311238	54467
SERVICIOS INSTITUCIONALES	211833	37071
=====		
TOTALES	1092973	191270

DEL TOTAL DE ADMINISTRACION Y FINANZAS SE PRORRATEA UN 25% A LA ESCUELA DE POSGRADO.

DEL 100% DEL COSTO TOTAL LOS PROYECTOS ASUMEN UN 30% DEL COSTO VIA OVERHEAD LO RESTANTE SE PRORRATEA UN 17.5% A LA ESCUELA DE POSGRADO.

BEST AVAILABLE DOCUMENT



COSTO DEL PERSONAL ADMINISTRATIVO DE LA ESCUELA DE POSGRADO

	COSTO MENSUAL COLONES	COSTO ANUAL DOLARES
PERSONAL APOYO ADMINISTRATIVO		
LUZ MARINA AGUERO	50046	4449
JEANNETTE SOLANO	65293	5804
MARTA GONZALEZ	56303	5005
ALEJANDRA SAENZ	71784	6381
MARTA MUÑOZ	60445	5373
BEVERLY VAZQUEZ	60445	5373
RODOLFO VEGA	37735	3354
TOMAS DITTEL	39649	3524
PERSONAL PROFESIONAL NACIONAL		
BERARDO MARTINEZ	159828	14207
OSWALDO MORA	199421	17726
PERSONAL PROFESIONAL PRINCIPAL		
ROSEFAW TWOLDE		52458
RAMON LASTRA		55200
TOTAL		178854

BEST AVAILABLE DOCUMENT

COSTO DEDICACION PROFESORES CONSEJEROS A LOS ESTUDIANTES

NOMBRE DEL ESTUDIANTE	PROFESOR CONSEJERO	SALARIO MENSUAL	DEDICACION 17.2 HORAS/EST. POR MES
<b>FITOPROTECCION</b>			
AMADOR VELAZQUEZ RICARDO	HILJE LUKO	3429	340
AGUILAR LOPEZ JOSE ANTONIO	MARBAN NAHUM	4382	438
ECHEBOMEN RAMOS PLUTARCO ELIAS	VALVERDE BERNAL	3319	332
LOPEZ MEDINA HECTOR FASIAN	BUSTAMANTE ELKIN	4419	440
OPTUNA CASTRO FELIPE NOEL	MARBAN NAHUM	4382	438
PERALTA LESLIE HIRAM	HILJE LUKO	3429	340
QUIROS TORRES CARLOS ARTURO	RAMIREZ OCTAVIO	4290	429
RIVAS PLATERO GONZALO GALILEO	LASTRA RAMON	4790	477
ROJAS MIRANDA TOMAS	MARBAN NAHUM	4382	438
SANCHEZ JIMENEZ HUMBERTO RAMON	DE LA CRUZ RAMIRO	4550	457
<b>FITOMEJORAMIENTO</b>			
MOPENO MARTINEZ JOSE LUIS	ESCALANT JEAN V.	3010	301
PERA GONZALEZ MARIA XENIA	BERTRAND BENOIT	3010	301
<b>GANADERIA TROPICAL</b>			
GOMEZ CASTRO HERIBERTO	TEWOLDE ASSEFAW	4561	456
JIMENE FERRER JOSE GUILLERMO	KASS MARIA	2127	213
LAINEZ MEJIA GERSAN	TEWOLDE ASSEFAW	4561	456
LOPEZ TECPOYOTL ZENON GERARDO	BENAVIDES JORGE	3062	306
MEJIA CORTEZ NAPOLEON ANTONIO	TEWOLDE ASSEFAW	4561	456
MERCADO ARIAS CARLOS	HOLLMANN FEDERICO	2555	256
URRIOLA ESCUDERO DAVID MARCEL	KASS MARIA	2127	213
<b>SILVICULTURA Y AGROFORESTERIA</b>			
ARAUJO DE SOUSA LIMA JORGE	FINEGAN BRYAN	3010	301
CALERO GONZALEZ CLAUDIO	SABOGAL CESAR	4054	405
CANCINO CANCINO JORGE	ARZE JOSE	4682	468
CELADA ROBLES JUAN ERNESTO	ARZE JOSE	4682	468
GONCALVES FERREIRA MARIA DE SOCORRO	VON PLATEN HENNING	3010	301
LONDONO MATURAMA DIOMEDES	AMMOUR TANIA	3564	356
LIMON LIMON ARTURO	KASS DONALD	4081	408
MEJIA CASCO ALEJANDRO CESAR	SABOGAL CESAR	4054	405
MELLENDEZ MARIN LUIS ALFONSO	SOMARRIBA EDUARDO	3605	361
MELO DE MIRANDA ELIAS	SALAZAR RODOLFO	4513	451
MUNOZ ARBOLEDA FERNANDO	BEER JOHN	3595	360
OBANDO ARAICA ROBERTO JOSE	VIQUEZ EDGAR	1882	188
REBOTTARO RINCON SILVIA L.	NYGREN PEKKA	3010	301

118688

11969

ANNEX 13

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**PROPOSED CATIE POSTGRADUATE BUDGET**

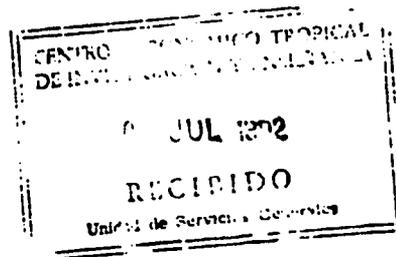
2 de Julio de 1972

A: Freddy Baeza, Encargado Presupuesto  
De: Gerardo Martinez, Oficial de Administracion  
Asunto: Presupuesto Operativo Escuela de Posgrado

Adjunto al presente le remito los formularios correspondientes a los centros de costo de la Escuela de Posgrado, (8101 Posgrado, 8102 Capacitacion) asi como un estimado de los ingresos por matriculas en capacitacion y posgrado.

Agradezco la atencion y estoy a la disposicion para cualquier aclaracion.

*Presupuesto Operativo  
Revisado \$80150*

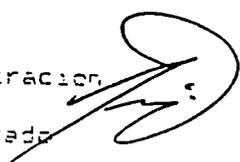


-4-

BEST AVAILABLE DOCUMENT

2 de julio de 1972

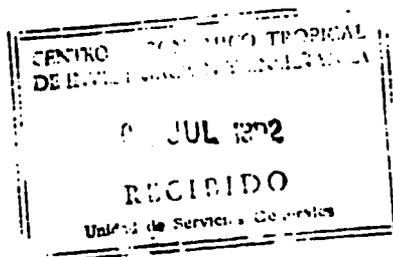
A: Freddy Baeza, Encargado Presupuesto  
De: Gerardo Martinez, Oficial de Administracion  
Asunto: Presupuesto Operativo Escuela de Posgrado



Adjunto al presente le remito los formularios correspondientes a los centros de costo de la Escuela de Posgrado, (8101 Posgrado, 8102 Capacitacion) asi como un estimado de los ingresos por matriculas en capacitacion y posgrado.

Agradezco la atencion y estoy a la disposicion para cualquier aclaracion.

*Presupuesto Operativo  
Revisado \$80150*



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BEST AVAILABLE DOCUMENT

PROGRAMA PRESUPUESTO

PERIODO: 1992  
 FONDO : 1  
 C. COSTO: 8101  
 PARTIDA: Viajes y Viáticos

Cuenta	MES	Descripción del Servicio	Costo
5102010	02	VIAJE A PAIS MIEMBRO (REDCA)	800
	04	VIAJE A PAIS MIEMBRO (REDCA)	800
	05	VIAJE A EE.UU	1500
	06	VIAJE A PAIS MIEMBRO (REDCA)	800
	07	VIAJE A LA REGION ENTREVISTA BECARIOS	2200
	09	ASAMBLEA REDCA	<del>25000</del>
	10	VIAJE DONANTE (EUROPA)	4500
5102020		ASISTIR REUNIONES CON DONANTES DE BECAS TRAMITE AUTENTIFICACION TITULOS EMBAJADAS ASISTIR REUNIONES INSTITUCIONES NACIONALES LLEVAR Y TRAER VISITANTES AEROPUERTO	3200
TOTAL MONEDA LOCAL			28800
TOTAL US\$			38800

Hecho por: GERARDO MARTINEZ 

BEST AVAILABLE DOCUMENT

CATIE

PROGRAMA PRESUPUESTO

PERIODO: 1992

FONDO : 1

C. COSTO: 8101

PARTIDA: Mantenimiento

Cuenta	MES	Descipcion del Servicio	Costo
5104030		REPARACION Y MANTENIMIENTO INSTALACIONES FLUORESCENTES, LLAVINES Y OTROS	1200
5104040		CAMBIO ACEITE, LAVADO, CAMBIO LLANTAS, COMBUSTIBLE Y OTROS VEHICULO ASIGNACION POSGRADO	2000 <i>2000</i>
5104050		LIMPIEZA, REPARACION Y MANTENIMIENTO MICROCOMPUTADORAS	1800 <i>1300</i>
TOTAL MONEDA LOCAL			<i>4500</i>
TOTAL US\$			5000

Hecho por:



PROGRAMA PRESUPUESTO

PERIODO: \_\_\_\_\_  
 FONDO : 1  
 C. COSTO: 8101  
 PARTIDA: Comunicación e Impresos

Cuenta	MES	Descripción del Servicio	Costo
5103010		MATERIALES DE OFICINA	<del>6400.</del> <del>4000</del>
5103020		FOTOCOPIADO	2000 1,500
5103040		SERVICIO TELEFONICO 56-10-16 SERVICIO TELEFONO INTERNO ENVIO CORRESPONDENCIA SOLICITUDES DE ADMISION Y OTROS ENVIO EXAMENES A PAISES DE LA REGION Y SUR AMERICA PUBLICACION Y PROMOCION EXAMEN DE ADMISION	<del>10000</del> 7500
5103050		ELABORACION VIDEO PROMOCIONAL MAESTRIA	<del>2200</del> 5000
5103070		PUBLICACION BOLETIN EGRESADOS CATALOGO SOBRE PROGRAMA MAESTRIA FORMULARIOS DATOS POSIBLES CANDIDATOS FORMULARIOS SOLICITUD ADMISION	4500 3500
5103080		ENVIO TELEX A DONANTES DE BECAS ENVIO TELEX CANDIDATOS A MAESTRIA ENVIO TELEX INFORMACION MAESTRIA	1400 1000
5103090		ENVIO FAX A DONANTES ENVIO FAX CANDIDATOS MAESTRIA ENVIO FAX INFORMACION MAESTRIA	2400 1500
TOTAL MONEDA LOCAL			24300
TOTAL US\$			34700

*6 provisiones  
A 3/12*

Hecho por: GERARDO MARTINEZ



BEST AVAILABLE DOCUMENT

PROGRAMA PRESUPUESTO

PERIODO: 1992  
 FONDO : 1  
 C. COSTO: 8101  
 PARTIDA: Gastos Generales

Cuenta	MES	Descipción del Servicio	Costo
5105150		ALMUERZO, CENAS CON REPRESENTANTES FUENTES DONANTES DE BECAS ATENCION A EVALUADORES DE PROGRAMA MAESTRIA EXCURSION CULTURA Y DE CONOCIMIENTO DE COSTA RICA PROMOCION 92-94 ACTIVIDAD OFICIAL GRADUACION RECIBIMIENTO PROMOCION 1993-1995 GASTOS GRUPOS CULTURALES Y DEPORTIVOS TRASPASO CONSEJO ESTUDIANTIL	10200
5105160		UTILES Y MATERIALES DE LIMPIEZA USO EDIFICIO ACADEMICO	1800
		STF	700
TOTAL MONEDA LOCAL			
TOTAL US\$			11900 <del>18000</del>

Hecho por:



CENTRO AGRONÓMICO TROPICAL DE INVESTIGACION Y ENSEÑANZA  
ESCUELA DE POSTGRADO

COSTO DE LOS ESTUDIOS DE POSTGRADO EN EL CATIE

	PRIMER AÑO	SEGUNDO AÑO	TOTAL
1. Viaje a Turrialba, Costa Rica (costo variable, estimado como promedio en:)	450		450(*)
2. Regreso al país de origen, luego de la graduación (costo variable, estimado como promedio:)		450	450(*)
3. Derechos de estudio	5000	5000	10000
4. Seguro Médico	240	240	480
5. Vida Estudiantil	200	200	400
6. Viajes obligatorios de estudio (giras al campo, conferencia)	400	400	800
7. Textos y materiales educativos	250	250	500
8. Servicios de computación	700	700	1400
9. Estipendio (alimentación, alojamiento, etc.)	7200	7200	14400(**)
10. Servicios de Laboratorio	750	750	1500
11. Trabajo de investigación y elaboración de tesis de Maestría:			
11.1 Asistencia técnica para el diseño		200	200
11.2 Costos operativos del experimento (insumos, mano de obra, etc.)		500	500
11.3 Elaboración del documento de tesis y reproducción de los volúmenes obligatorios		800	800
11.4 Derechos de graduación y candidatura		150	150
TOTAL	15190	16840	32030

(\*) Costo promedio de los viajes desde y hacia los países miembros. Para el resto de los países, principalmente en Sudamérica, los costos son significativamente superiores....

(\*\*) Este monto corresponde a un estipendio mensual de \$600 y esta considerado para el estudiante casado sin hijos. En el caso de estudiantes casados con hijos se considera en \$650 y para los solteros se reduce a \$500 mensuales.

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ANNEX 14

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**CATIE VEHICLE LIST**

LISTA DE VEHICULOS DEL CATIE

# PLACA	# MOTOR	# CHASIS	MARCA	MODELO	ESTILO	COLOR	FECHA DE INSCRIPCION	SEDE	USO
MI-33-101	T027079899	JBMD21406217	NISSAN	1989	CAMPU	BLANCO	14-09-89	NICARAGUA	A.F.N.
MI-33-140	T027-103514	4BYD4-101554	NISSAN	1989	TERRANO	ROJO	22-02-90	TURRIALBA	A.F.N.
MI-33-80	224-267550W	KNMP21-0023	NISSAN	1989	DOBLE CABINA	GRIS	16-05-89	TURRIALBA	A.F.N.
MI-33-89	T027-043430	BM021-001677	NISSAN	1989	CARGA	GRIS	23-05-89	NICARAGUA	A.F.N.
MI-33-104	T027-077445		NISSAN	1990				TURRIALBA	A.F.N.
MI-33-228		33M021-434946	NISSAN	1992	PICK UP	BLANCO		NICARAGUA	A.F.N.
MI-33-111	T027-077488		NISSAN	1989		BLANCO	05-05-90	TURRIALBA	A.F.N.
MI-33-152	F035-029333	58HA0000119	NISSAN	1990	TERRANO	BLANCO	18-05-90	TURRIALBA	A.F.N.
MI-33-102	T027079952	UBMD21-406217	NISSAN	1989	CAMPU	BLANCO	14-09-89	TURRIALBA	A.F.N.
MI-33-223	URGY60-009681	TD42058587	NISSAN	1992	PATROL	BLANCO		TURRIALBA	A.F.N.
MI-33-126	T027-099738	WBYD4-100518	NISSAN	1990	PATHFINDER	AZUL	19-01-90	TURRIALBA	A.F.N.
MI-33-92	T027053754	BM021-420085	NISSAN	1989	D-21	ROJO	30-05-89	NICARAGUA	A.F.N.
MI-33-113	T027-030006	LV1060017273	NISSAN	1990	CARGA	BLANCO	13-10-89	TURRIALBA	A.F.N.
MI-33-138	T027-103382	4BYD4-101556	NISSAN	1990	TERRANO	AZUL	21-02-90	TURRIALBA	A.F.N.
MI-33-79	T027054328	EM021-420082	NISSAN	1989	D-21	GRIS	16-05-89	NICARAGUA	A.F.N.
MI-33-137	T027103463	WBYD21101557	NISSAN	1990	TERRANO	CELESTE	21-02-90	TURRIALBA	A.F.N.
MI-33-241			ISJZU		PICK-UP			EL SALVADOR	ACDI
MI-33-242			ISUZU		PICK-UP			EL SALVADOR	ACDI
MI-33-170	2243600385W	WBYD4-007455	NISSAN	1990	PATHFINDER	VERDE	11-09-90	TURRIALBA	ACDI
MI-33-125			TOYOTA		JEOP			GUATEMALA	ACDI
MI-33-232			TOYOTA		PICK-UP			HONDURAS	ACDI
MI-33-239			TOYOTA		PICK-UP			NICARAGUA	ACDI
MI-33-243			ISUZU		PICK-UP			GUATEMALA	ACDI
MI-33-122	B-1092431	BJ70-0011461	TOYOTA	1990	RURAL	GRIS	24-01-90	HONDURAS	ACDI
MI-33-131	39-1022651	BJ70-011474	TOYOTA	1990	LAND CRUISER	GRIS	24-01-90	GUATEMALA	ACDI
MI-33-130	2H-127012	HJ75-0036642	TOYOTA	1990	LAND CRUISER	BLANCO	22-02-90	NICARAGUA	ACDI
MI-33-246			TOYOTA		JEOP			EL SALVADOR	ACDI
MI-33-153	331082478	BJ700011465	TOYOTA	1990	RURAL	BLANCO	18-05-90	NICARAGUA	ACDI
MI-33-156	2H1212150	H3750037202	TOYOTA	1990	LAND CRUISER	BLANCO	13-05-90	HONDURAS	ACDI
MI-33-175	B-4-3680704		NISSAN	1991	TERRANO	AZUL		TURRIALBA	AREAS PROTES.
MI-33-70	513A-571462	53-50145031	SUZUKI	1989	SAMURAI	VERDE	27-04-89	TURRIALBA	AREAS SILV.
MI-33-59	513A-571240	3350-145031	SUZUKI	1989	SAMURAI	VERDE	27-04-89	TURRIALBA	AREAS SILV.
MI-33-042	22468075W	WBYD21007573	NISSAN	1990	PATHFINDER	AZUL FERLAG		TURRIALBA	AREAS SILV.
MI-33-496	2L-1015324	LN56-0032959	TOYOTA	1985	PICK UP	BLANCO	08-11-87	TURRIALBA	CACAO
MI-33-250	3L2972886		TOYOTA	1992	HILUX	ROJO		TURRIALBA	COSUDE
MI-33-196	T027-154282	UBMD21-433683	NISSAN	1991	NISSAN	BLANCO		TURRIALBA	COSUDE
MI-33-182			FORD	1991	AUTOMOVIL	CELESTE		TURRIALBA	CUENCAS
MI-33-124			FORD	1991	AUTOMOVIL	CELESTE		TURRIALBA	CUENCAS
MI-33-249	3L2949666		TOYOTA	1992	HILUX	BLANCO		NICARAGUA	DANIDA-MANSLAFE
MI-33-115	3L-1973573	LN106-0017316	TOYOTA	1990	HILUX	BLANCO	10-10-89	TURRIALBA	G.T.Z. AGRIF
MI-33-192	HLHC-6009640		TOYOTA	1991	L. CRUISE			TURRIALBA	E.T.Z. AGRIF
MI-33-154	AD56C80699	DL049VLJ400464	MITSUBISHI	1990	FAMILIAR	ROJO	19-05-90	TURRIALBA	G.T.Z. AGRIF
MI-33-28	2L-1534744	LN65-0063583	TOYOTA	1986	HILUX	AZUL	01-06-90	CAHUITA	G.T.Z. AGRIF
MI-33-88	36-1033597	BJ70-0010204	TOYOTA	1989	LAND CRUISER	BLANCO	20-05-89	TURRIALBA	G.T.Z. AGRIF
MI-33-78	3L-1812256	LN106-005571	TOYOTA	1989	HILUX	CELESTE	12-05-89	TURRIALBA	G.T.Z. AGRIF
MI-33-114	46-13-LH4925	DLF64VLUD0224	MITSUBISHI	1990	MONTERO	GRIS	05-10-89	TURRIALBA	G.T.Z. AGRIF
MI-33-112	3L-1973884	LN1060017273	TOYOTA	1990	PATHFINDER	BLANCO	05-10-89	TURRIALBA	G.T.Z. AGRIF
MI-33-143	613A572123	S350-145218	SUSUKI	1989	RURAL	VERDE	08-03-90	TURRIALBA	G.T.Z. AGRIF
MI-33-125	6B4464643	S351-105967	SUSUKI	1989	PICK UP	GRIS	22-02-90	TURRIALBA	G.T.Z. AGRIF
MI-33-581	06-036140	UM222252FH0696648	VOLVSWAGEN	1985	MICROBUS	CAFE	01-02-86	TURRIALBA	G.T.Z. FITO

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MI-33-19-	134-374935-		NISSAN	1991	PATHFINDER	AZUL		TURRIALBA	BLAFD
MI-33-25	241172643	HJ75-0034900	TOYOTA	1989	LAND CRUISER	BLANCO	18-05-89	TURRIALBA	BLAFD
MI-33-107	522383	IDA00F7700500454	DAIHATSU	1989	PICK UP	ROJO	19-09-89	TURRIALBA	P.BASICA
MI-33-195	2E-2127156		TOYOTA	1991	COROLLA	BLANCO		TURRIALBA	P.BASICA
MI-33-110	514563	IDA00F700634335	DAIHATSU	1989	JEEP	BLANCO	19-09-89	TURRIALBA	P.BASICA
MI-33-55	210324	5J40-041151	TOYOTA	1980	LAND CRUISER	NARANJA	21-02-89	TURRIALBA	P.BASICA
MI-33-188	HC-0147639		DAIHATSU	1990	CHARADE	GRIS PERLAD		TURRIALBA	P.BASICA
MI-33-222	LB120-135901	LB120STH	NISSAN	1992	PICK UP	BLANCO		TURRIALBA	P.BASICA
MI-33-190	1E2-0002503		TOYOTA	1990	L. CRUISER	GRIS		TURRIALBA	P.BASICA
MI-2-270	55290-10-536914	318052-14-475929	MERCEDES BENZ	1982	MICROBUS	VERDE	18-06-82	TURRIALBA	P.BASICA
MI-33-146	EK30E53070		CHEVROLET	1989	CHEVETTE	PLOMC		TURRIALBA	P.BASICA
MI-2-155	80493220	4365006210063	INTERNATIONAL	1973	1973	AMARILLO	09-06-75	TURRIALBA	P.BASICA
MI-33-31	481259	IDA00F700621872	DAIHATSU	1988	ROCKY	PLATEADO	14-06-88	TURRIALBA	P.BASICA
MI-33-109	1645377	IDA6100500640742	DAIHATSU	1989	SEDAN	BLANCO	22-07-89	TURRIALBA	P.BASICA
MI-2-924	V345LP6552438	13682EH424075	INTERNATIONAL	1975	BUS	AMARILLO	07-03-87	TURRIALBA	P.BASICA
MI-33-108	522307	IDA00F7700500462	DAIHATSU	1989	PICK UP	BLANCO	19-09-89	TURRIALBA	P.BASICA
MI-33-106	1645634	IDA6100500640742	DAIHATSU	1989	SEDAN	PLATEADO	19-09-89	TURRIALBA	P.BASICA
MI-2-109	780143		ISUZU	1971	VAGONETA	GRIS		TURRIALBA	P.BASICA
MI-33-149	2L24060987	L41140000265	TOYOTA	1990	MICROBUS	BEISE	20-04-90	TURRIALBA	P.BASICA
MI-33-27	V090107PCJF117430	16NGV26K2JF117430	CHEVROLET	1988	SUBURBAN	GRIS	20-05-88	TURRIALBA	P.BASICA
MI-2-069	ED-264746101	5B189092	INTERNATIONAL	1961	DEMPSTER	VERDE		TURRIALBA	P.BASICA
MI-33-30	487001	JBA000F7700500262	DAIHATSU	1988	ROCKY	AZUL	14-06-88	TURRIALBA	P.BASICA
MI-33-32	496187	JBA000F7000623276	DAIHATSU	1988	ROCKY	PLATEADO	14-06-88	TURRIALBA	P.BASICA
MI-33-155	2E19273E9	EE-900264795	TOYOTA	1990	SEDAN	MORADO	18-05-90	TURRIALBA	P.BASICA
MI-33-26	C101207PCJF120278	16NGV26K4JF120278	CHEVROLET	1988	SUBURBAN	GRIS	20-05-88	TURRIALBA	P.BASICA
MI-33-171	U630615444	4130-601074	NISSAN	1990	SEDAN	CELESTE	16-09-90	TURRIALBA	P.BASICA
MI-33-167	F20AS1003504		HONDA	1990	SEDAN			TURRIALBA	P.BASICA
MI-33-175	2E2060170	EE970007269	TOYOTA	1991	COROLLA	BLANCO		TURRIALBA	P.BASICA
MI-33-227	204 C 27	1JECM25N3CT050515	JEEP	1982	CJ 10	CAFE		TURRIALBA	P.BASICA
MI-33-25	V090907PCJF118045	16NGV26K4JF118045	CHEVROLET	1988	SUBURBAN	GRIS	20-05-90	TURRIALBA	P.BASICA
MI-33-24	468T420527585	14ULPTVNEJH559474	INTERNATIONAL	1987	BUS	AMARILLO	20-05-88	TURRIALBA	P.BASICA
MI-2-548	FW8378B018953N	9B66653N1HC6007079	G.H.C.	1987	VAGONETA	ROJO		TURRIALBA	P.BASICA
MI-33-229	2E390142		TOYOTA	1992	COROLLA	BLANCO		TURRIALBA	P.BASICA
MI-33-251	467569		CHEVROLET	1980	LUV	ROJO		TURRIALBA	P.BASICA
MI-33-234	LB120-135861	LB120STH	NISSAN	1992	PICK UP	BLANCO		TURRIALBA	P.BASICA
MI-33-122	564175	JOM53ED066913		1980	JEEP CJ7	ROJO	22-02-89	TURRIALBA	P.BASICA
MI-33-105	514309	IDA00F700634318	DAIHATSU	1989	JEEP	BLANCO	19-09-89	TURRIALBA	P.BASICA
MI-33-187	HC01477804		DAIHATSU	1990	CHARADE	BLANCO		TURRIALBA	P.BASICA
MI-33-250	2E23282031		TOYOTA	1992	TERCEL	BLANCO		TURRIALBA	P.BASICA
MI-33-65	2E-1459813	EE90-0138195	TOYOTA	1989	COROLLA	BLANCO	29-04-89	TURRIALBA	P.BASICA
MI-33-206	553071	V5812701	DAIHATSU	1991	ADRALES	BLANCO		TURRIALBA	P.FISICA
MI-33-94	381027531	8570-0010036	TOYOTA	1989	RURAL	BLANCO	09-08-89	TURRIALBA	PODYNIVA
MI-33-108	2L-1352712		TOYOTA	1987				NICARAGUA	PRO-NORTE
MI-33-123		AFTEY15YXKKB14777	FORD	1989	CAMPU	BEISE	19-09-90	TURRIALBA	PROCACAO
MI-33-121		FFEX1518KKB14776	FORD	1989	CAMPU	BEISE	07-12-89	TURRIALBA	PROCACAO
MI-33-226	T0121FFPCHS143843		CHEVROLET	1987	CAMPLS	BLANCO		TURRIALBA	PROGRAMA I
MI-33-66	2E-1461040	EE90-0138261	TOYOTA	1989	COROLLA	BLANCO	20-04-89	TURRIALBA	PROGRAMA I
MI-33-189	1FH0U3414HUR24340		FORD	1991	EXPLOREP	CELESTE		TURRIALBA	PROGRAMA I
MI-33-124	24-1201779		TOYOTA	1989	PICK UP	AZUL		TURRIALBA	PROGRAMA II
MI33-133			TOYOTA	1990	COROLLA			PANAMA	REPRESENTACION
MI-2182	407384		DAIHATSU	1988	ROCKY	BLANCO		HONDURAS	REPRESENTACION
MI2-251	SD33-103145		NISSAN	1981				NICARAGUA	REPRESENTACION
MI2-261	F0-06058		JEEP	1985	CHEROKEE	CHAMPAGNE		GUATEMALA	REPRESENTACION
MI-2-369	2H-1059674	HJ47-027986	TOYOTA	1984	PICK UP 4X4	BLANCO	04-01-84	TURRIALBA	RNR
MI-33-216	4D56DU4655	DH2P15MMAC0649	MITSUBISHI	1992	MICROBUS	BEISE		TURRIALBA	U.A.M.
MI-33-85	2L1840793	LJ70-0005553	TOYOTA	1989	LAND CRUISER	BLANCO	13-09-89	GUAPILES	U.A.M.

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MI-33-163		JFTEF14YBLK49913	FORD	1990	CAMPU	ROJO	10-05-90	TURRIALBA	GANADERIA
MI-33-164	486725	JDA000F7700500252	DAIHATSU	1988	ROCKY	ROJO	14-05-86	TURRIALBA	GANADERIA
MI-33-247	4Y0321373		TOYOTA	1992	HILUX	BLANCO		TURRIALBA	GANADERIA
MI-33-73	840386	JF1AK5BL0CE254889	SUBARU	1989	1800	EPIS		TURRIALBA	IFRCC
MI-33-74	839762	JF1AK5BL0CE254941	SUBARU	1989	1800	VERDE		TURRIALBA	IFRCC
	513A-404740		SUZUKI	1988				HONDURAS	MADEIRA
MI-33-208	F024854	1JEBL651EJT125269	JEEP	1988	COMANCHE	BLANCO		HONDURAS	MADEIRA
MI-33-209	F024792	1JEBL651JT124200	JEEP	1988	COMANCHE	BLANCO		TURRIALBA	MADEIRA
MI-1225		EJT125263	COMANCHE	1988	PICK UP	BLANCO		HONDURAS	MADEIRA
MI-33-207	F024660		JEEP	1988	CHEROKEE	BLANCO		EL SALVADOR	MADEIRA
MI-33-210	F025449	1JEBL781EJT124294	JEEP	1988	CHEROKEE	BLANCO		TURRIALBA	MADEIRA
MI-33-23	F-024601	1JEBL781EJT121380	JEEP	1988	STATION	BLANCO	11-05-87	SAN JOSE	MADEIRA
MI-1826		EJT124297	CHEROKEE	1988	CAMIONETA	BLANCO		HONDURAS	MADEIRA
MI-33-20	F-024786	1JEBL781EJT121377	JEEP	1988	STATION	BLANCO	11-05-87	SAN JOSE	MADEIRA
MI-33-211	F024934		JEEP	1988	CHEROKEE	BLANCO		EL SALVADOR	MADEIRA
MI-11296	124296		JEEP	1988	CHEROKEE	BLANCO		EL SALVADOR	MADEIRA
MI-33-18	F-024323	1JEBL781EJT121377	JEEP	1988	STATION	BLANCO	11-05-87	PANAMA	MADEIRA
MI-33-21	F-024774	1JEBL781EJT121378	JEEP	1988	STATION	BLANCO	11-05-87	TURRIALBA	MADEIRA
MI-33-17	F-024626	1JEBL781EJT124292	JEEP	1988	STATION	BLANCO	11-05-87	GUATEMALA	MADEIRA
P-152877	FD-24863		JEEP	1988	CHEROKEE	BLANCO		GUATEMALA	MADEIRA
MI-33-245	A12-361678E		NISSAN	1992	PICK UP			NICARAGUA	MANGLARES
MI-33-248	A12-361786E		TOYOTA	1992	HILUX	ROJO		P. NORTE	MANGLARES
MI-33-257		UNLHD21434855	NISSAN	1992	PICK UP	BLANCO		P. NORTE	MANGLARES
MI-33-236		FE449FA50004	MITSUBISHI	1991	CAMION	BLANCO		P. NORTE	MANGLARES
MI-33-52	3L-1752254	LN1060001524	TOYOTA	1989	HILUX	BLANCO	20-02-89	TURRIALBA	MEJ. GENET.
MI-33-134	A0907111MC	1G0CT19R8K2278003	CHEVROLET	1989	CAMPUS	BLANCO	23-02-90	TURRIALBA	MEJ. GENET.
MI-33-55	3L-1752360	LN1060001487	TOYOTA	1989	HILUX	BLANCO	21-02-87	TURRIALBA	MEJ. GENET.
MI-33-58	514117	JDA000F7000634286	DAIHATSU	1989	ROCKY	BLANCO	03-03-89	TURRIALBA	MEJ. GENET.
MI-33-245	E16477080M		NISSAN	1992	SUNNY	BLANCO		TURRIALBA	MIP
MI-33-175			FORD	1991	AUTOMOVIL	CELESTE		TURRIALBA	MIP
MI-33-473	703-95		CHEVROLET	1985	PICK UP			TURRIALBA	MIP
MI-33-49	3L-1762108		TOYOTA	1989				NICARAGUA	MIP
MI-33-41	0F-8668		MITSUBISHI	1990				NICARAGUA	MIP
MI-33-180			FORD	1991	AUTOMOVIL	CELESTE		TURRIALBA	MIP
MI-33-233	10MX22		CHEROKEE	1992	JEEP	BLANCO		TURRIALBA	MIP
MI-33-225			CHEROKEE	1992	JEEP	BLANCO		TURRIALBA	MIP
MI-33-181			FORD	1991	AUTOMOVIL	CELESTE		TURRIALBA	MIP
MI-33-262	A12366644E		NISSAN	1992	CARGA	BLANCO		TURRIALBA	MIP
MI-0763	0181191		TOYOTA	1978	JEEP	CAFE		HONDURAS	MIP
MI-33-179			FORD	1991	AUTOMOVIL	CELESTE		TURRIALBA	MIP
MI-33-22	F-02-1867	1JEBL781EJT124298	JEEP	1988	STATION	BLANCO	11-05-87	TURRIALBA	MIP
MI-33-183			FORD	1991	AUTOMOVIL	CELESTE		TURRIALBA	MIP
MI-33-19	F-024669	1JEBL781EJT124299	JEEP	1988	STATION	BLANCO	11-05-87	GUATEMALA	MIP
MI-33-35			SUZUKI	1990				NICARAGUA	MIP-NORAD
MI-33-29			SUZUKI	1990				NICARAGUA	MIP-NORAD
MI-33-27	TD-27-043-30		TOYOTA	1990				NICARAGUA	MIP-NORAD
MI-33-20			SUZUKI	1989				NICARAGUA	MIP-NORAD
MI-33-30			SUZUKI	1990				NICARAGUA	MIP-NORAD
MI-33-261	EL400015774		TOYOTA	1992	TERCEL	BLANCO		TURRIALBA	OLAF0
MI-33-59	513A-571292	SJ50-145038	SUZUKI	1989	SAMURAI	VERDE	27-04-89	TALAMANCA	OLAF0
MI-33-50	4056-CE1701	DL044VKJ400215	MITSUBISHI	1989	MONTERO	GRIS	05-02-39	TALAMANCA	OLAF0
MI-33-67	513A-571442	SJ50-145030	SUZUKI	1989	SAMURAI	VERDE	27-04-89	TALAMANCA	OLAF0
MI-33-71	513A-571198	SJ50-145026	SUZUKI	1989	SAMURAI	VERDE	27-04-89	GUATEMALA	OLAF0
MI-33-185	4Y-0277358		TOYOTA	1990	HILUX	ROJO		TURRIALBA	OLAF0
MI-33-07			MITSUBISHI	1990				NICARAGUA	OLAF0
MI-33-124	2H-1201779		TOYOTA	1989				NICARAGUA	OLAF0

MI-33-97	3E-1027754	BJ70-0010050	TOYOTA	1989	LAND CRUISER	BLANCO	14-08-89	GUAPILES	U.A.W.
MI-33-61	3L-17600272	9	TOYOTA	1989	HILUX	GRIS	02-03-89	GUAPILES	J.A.L.
MI-33-47	6130441237	S750-133592	SUZUKI	1982	SJ413	GRIS		GUAPILES	J.A.L.
MI-33-103	2E-1565029	EE97-0004405	TOYOTA	1989	COROLLA	BLANCO	14-09-89	TURRIALBA	U.A.W.
MI-33-62	3L-174748E	LN106-0002284	TOYOTA	1989	HILUX	BLANCO		TURRIALBA	U.A.W.
MI-33-157	3L2149921	LN1060028654	TOYOTA	1990	HILUX	PLATEADO	1E-05-90	TURRIALBA	U.A.W.
MI-33-96	3E-11027632	BS70-0010043	TOYOTA	1989	LAND CRUISER	BLANCO	14-08-89	GUAPILES	U.A.W.
MI-33-174	2E2052345		TOYOTA	1990	COROLLA	BEIGE	08-08-90	TURRIALBA	UICN
MI-33-57	613A-443917	SJ51-105756	SUZUKI	1988	SJ413	BLANCO	21-02-89	TURRIALBA	VIGILANCIA
MI-33-76	3L1816166	LN106006177	TOYOTA	1989	PICK UP	BLANCO		TURRIALBA	AGROFORESTALES
MI-33-215	3L2640574	LN106-0055236	TOYOTA	1992	HILUX	BLANCO		TURRIALBA	G.T.Z. AGRIC
MI-33-235	322849035		TOYOTA	1992	RUNNER	PLATEADO		TURRIALBA	PROY. DEFOREST
MI-33-46	T027-039340	UBD21-405052	NISSAN	1989	D21	BLANCO	24-01-89	TURRIALBA	RAICES Y TUB.
MI-33-95	3L-1817857	LV106-0006060	TOYOTA	1989	HILUX	GRIS	09-08-89	TURRIALBA	SILVICULTURA
MI-33-33	484953	JDA000F7000622950	DAIHATSU	1988	ROCKY	AZUL	14-06-88	TURRIALBA	SILVOPASTORIL

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**NETWORKING INTERVIEWS**

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**ANNEX 15**  
**NETWORKING INTERVIEWEES**

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**CATIE**

Orlando Arboleda	Information specialist, fitoprotection area
Jose Arze	Head of training
Ramon Lastra	Director of educational programs
Emilio Mora	Director of student affairs
Octavio Ramirez	Fitoprotection specialist, Integrated Pest Management project
Carlos Rivas	Director of Integrated Natural Resources Management Program
Joe Saunders	Director of Sustainable Agriculture Program and head of the Integrated Pest Management project (RENARM-MIP)
Assefaw Tewelde	Head of postgraduate program and animal genetics specialist

**Costa Rica**

**Representatives of REDCA Member Institutions**

Israel Calvo	Instituto Tecnologico de Costa Rica (ITCR)
Jorge Camacho	Universidad Nacional de Heredia (UNA)
Ramon Fallas	Escuela Centroamericana de Ganaderia
Ana Lorena Jimenez	Consejo Nacional para Investigaciones Cientificas y Tecnologicas (CONICIT); president of REDCA/Costa Rica
Margarita Meseguer	Asociacion Costarricense de Egresados IICA/CATIE
Emilio Mora	Secretario Tecnico de REDCA/Costa Rica, CATIE
Jose Ramirez	Union Internacional para la Conservacion de la Naturaleza (UICN)

**CATIE Alumni Association Members**

Oscar Brenes	Assistant to the regional coordinator, World Wildlife Fund
Margarita Meseguer	Deputy director, University of Costa Rica, Atlantic campus

**El Salvador**

**Representatives of REDCA Member Institutions**

Ricardo Barahona	Universidad Centroamericana Jose Simon Canas (UCA), president of REDCA committee
Marlene de Elias	Centro de Tecnologia Agricola (CENTA)
Joaquin Larios	Technical coordinator, CATIE; technical secretary, REDCA/El Salvador

Jose Antonio Puig                      Universidad Catolica del Occidente (UNICO)

**CATIE Alumni Association Members**

Nicolas Guillen	Technician, FUSADES/DIVAGRO
Jorge Mercado	Technical assistant, CIDA/CATIE Technology Validation project
Celina Merino	Fitoprotection specialist, ISIC/PROCAFE
Francisco Merino	Consultant on CENTA reorganization
Guillermo Ramos	Professor, Escuela Nacional de Agricultura Roberto Quinonez (ENA)
Roberto Rodriguez	Director general of CENTA

**Guatemala**

**Representatives of REDCA Member Institutions**

Orlando Arjona	Director of Agricultural Sciences department, Universidad del Valle
Bruno Busto Brol	General manager, Instituto de Ciencia y Tecnologiz Agricolas (ICTA); President of National REDCA Committee
Efrain Medina	Dean of the School of Agronomy, Universidad de San Carlos
Bladimiro Villeda	CATIE representative; technical secretary of REDCA/Guatemala

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**REDCA QUESTIONNAIRE**

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**ANNEX 16**  
**REDCA QUESTIONNAIRE - EL SALVADOR**

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1. ¿Cuándo se formó el comité nacional de REDCA en El Salvador?
  
2. ¿Que tipos de actividades han sido realizadas o fomentadas por parte de REDCA desde que comenzó a funcionar?  
  
Entre los miembros de REDCA en el país-  
  
Entre El Salvador y otros países miembros de REDCA-  
  
Entre El Salvador y CATIE-
  
3. ¿Consideran que REDCA es una organización horizontal or vertical en sus relaciones entre los miembros? Explica.
  
4. ¿De donde provienen los fondos para realizar las actividades?
  
5. ¿Cuales han sido los logros o beneficios que ha traído participación en REDCA a las instituciones miembros?
  
6. ¿Cuales son las actividades las cuales no han sido muy exitosas or utiles? ¿Porque?
  
7. ¿Cuales actividades debía haber hecho REDCA para hacerla una red mas eficaz y útil para sus miembros?

ANNEX 17

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**CATIE-UNIVERSITY COLLABORATIVE PROJECTS**

COLABORATIVE PROJECTS BETWEEN US-UNIVERSITIES AND CATIE

UNIVERSITIES	DESCRIPTION OF COLABORATION
Colorado State	<ul style="list-style-type: none"> <li>-Students exchange (1 Ph.D. and 7 M.Sc. from CATIE)</li> <li>-Annual course plant cell and tissue culture</li> </ul>
Wisconsin	<ul style="list-style-type: none"> <li>-Watershed Management joint project MARENA-AID</li> <li>-Watershed Management joint project "La Fortuna" Panamá</li> <li>-Student exchange</li> <li>-Plant Protection and Biological Control</li> <li>-Animal Genetics</li> </ul>
Minnesota	<ul style="list-style-type: none"> <li>-Geographic Information Systems</li> <li>-Remote sensing</li> <li>-Data base for Silviculture</li> <li>-Student exchange (1 M.Sc. at CATIE)</li> <li>-Project Biological Control of Plant Pests</li> </ul>
Yale	<ul style="list-style-type: none"> <li>-Wildland Management and Land use</li> <li>-Student exchange (M.Sc. and Ph.D. at CATIE)</li> <li>-Agroforestry and Silviculture</li> </ul>
Michigan	<ul style="list-style-type: none"> <li>-Training and Education</li> </ul>
Cornell	<ul style="list-style-type: none"> <li>-Curricular development in Soil Sciences</li> <li>-Desing of graduate courses in Soil Sciences</li> <li>-Sabbatical leave (Professor at CATIE)</li> <li>-Pest Management modeling (Professor sabbatical at CATIE)</li> </ul>
Pennsylvania State	<ul style="list-style-type: none"> <li>-Plant breeding in Cocoa, electrophoretic patterns of new hybrids</li> </ul>
Missouri	<ul style="list-style-type: none"> <li>-Project in Animal Sciences (Nutrition, Genetics, Animal Health)</li> <li>-Embryo transfer</li> <li>-Project in Integrated Pest Management</li> </ul>
Ohio State	<ul style="list-style-type: none"> <li>-Nutrient cycling silvopastoral Systems</li> </ul>
Iowa State	<ul style="list-style-type: none"> <li>-Satelite network for educational purposes</li> <li>-Curricular development in the Area of Agribusiness</li> <li>-Agricultural Teacher and Extension Education Project</li> </ul>
North Carolina State	<ul style="list-style-type: none"> <li>-Cooperation on Integrated Pest Management</li> </ul>
Columbia	<ul style="list-style-type: none"> <li>-Joint project promising tropical crop applying tissue culture techniques</li> </ul>

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**REDCA PURPOSE, STRUCTURE, AND MEMBERS**

Regional Network for Cooperation in Higher Education and Training in Agricultural and Renewable Natural Resources (REDCA).

The founding of the Regional Network for Cooperation in Higher Education and Training in Agricultural and Renewable Natural Resources (REDCA), which includes 55 higher education institutions, Ministries of Agriculture, Research Institutes and National Higher Educations Councils of the seven member countries, represents the main mechanism or strategy for taking action. Through the operation of this Network, CATIE procures the strengthening of the national research and teaching institutions, receives support form such institutions for furthering its programs and promotes exchange and cooperation among all of them. Within the framework of said network, numerous scientific, academic and development projects - both of national and regional nature - area being carried out. This "modus operandi" significantly emphasized the regional characteristics of CATIE's action and has received ample support and recognition from the member countries and their institutions.

1. REDCA's Purposes and objectives

Purpose: To contribute towards the improvement of the quality of research, higher educations, training and extension concerning agricultural matters and natural resources for an accelerated and sustained development.

Objectives: To propitiate cooperation among the national Institutions, both at the level of each country and the regional level. To facilitate CATIE's cooperation with the research, higher education, training and extension programs of the institutions

belonging to the network, both at the level of each country and at a regional level.

To facilitate the cooperation of the institutions belonging to the network, in regard to CATIE's national and regional programs and projects, CATIE is being an organization at the service of its member countries.

## 2. REDCA'S BASES

REDCA is a horizontal cooperation mechanism. REDCA promotes an attitude of reciprocal respect not taking into account possible differences based on the volume of resources or hierarchy of the scientific-academic status. There is added there to the design in common of solutions and the common disposition of resources to further actions of interest to everyone involved. Consequently, in the Network's framework, leadership is based on consensus and follows the mandate of the assembly.

REDCA is a structure of a multilateral nature. It is to be understood thereby, that there will be an instance of permanent harmony among many and not a sum of bilateral agreements. This also defines the type of commitments that are assumed when joining REDCA.

REDCA is regional integration mechanism. This aspect implies a geopolitical conception, in the sense that many of the structural weaknesses of the developing countries, derived from their isolation and from the impossibility to face the problems individually. Thus, many of the solutions depend upon the recognition that there exists a common destiny among the region's countries. Therefore, mechanisms such as REDCA, conceived as instruments for regional integration, acquire relevance.

### 3. REDCA'S STRUCTURE AND ORGANIZATION

In the various organizational levels CATIE's participation is evident, both through its representations in the Member Countries and its Central Headquarters. That participation consists of merely making available to the national institutions -- both at the national and regional level -- the facilities and resources of the Center. This Center should be viewed at all times as an organization belonging to countries of the region, and whose purpose, among others, is to strengthen the national institutions of research and education and promote cooperation among them.

#### 3.1. Geographic Limits of the Network

The Network shall be comprised of the national and regional institutions within the member countries of CATIE, recognizing that, in the areas of agricultural development and renewable natural resources, the region's problems are relatively homogeneous.

This geographical limitation does not exclude, however, the participation of institutions outside the countries that make up CATIE. Those other countries, as pointed out below, may also be members or act as observers.

#### 3.2. Members of the Network

3.2.1. The regular members of the Network shall be: CATIE, the institutions of higher education, training, research and extension, as well as the Ministries or National Departments or Ministries of Agriculture, Livestock, Natural Resources or similar entities and National Councils of Higher Education, which have adhered to and will continue to adhere to the Network, and which are within the member countries of CATIE.

- 3.2.2 Adherent Members of the Network shall be: organizations and institutions similar to those described in the previous point, of the other countries of Latin America and the Caribbean, as well as countries outside of the region. The General Secretariat of the Network shall grant this type of membership at the request of the institutions and ad referendum of the Assembly's decision.
- 3.2.3 Other national, regional and international institutions and organizations may serve as Permanent Observers, both for the Assembly and the Executive and National Committee, if such entities are accepted on the basis described in the previous point.
- 3.2.4. The rights and obligations of the Regular Members and Adherents are well as those of the Permanent Observers shall be established in the bylaws.
- 3.3. Bodies of the Network

The Bodies of the Network shall be: the Assembly, the Executive Committee, the National Committees and the General Secretariat.

3.3.1 The Assembly

The Assembly of the representatives from the institutions and organizations comprising the Regular Members of the Network, constitute the ~~Network's Supreme Governing Body. This body is~~

responsible for decision-making with respect to the fundamental matters of the Network, such as its constitution and dissolution, the definition of policies and strategies, the approval of the its bylaws and the approval of programs, projects and activities that regionally affect the whole of its Members. The Assembly of the Network shall ordinarily meet once a year, at the place and on the date the majority of the Regular Members agree to. The, rests of the attributes and functions of the Assembly shall be specified in the bylaws.

### 3.3.2 The Executive Committee

The Executive Committee shall be comprised of the Technical Secretaries of the Network at the national level of each of CATIE's member countries. The chairman of the General Secretariat shall be the Secretary of the Executive Committee. The Executive Committee must see to it that the agreements of the Network's Assembly regarding programs, projects and activities of interest to the whole region are carried out, support the General Secretariat in the pursuit of the resources needed to carry on the Network and prepare the agenda for the annual assemblies. The functions and authority of the Executive Committee shall be specified in the bylaws. This body shall ordinarily meet at least twice a year.

### 3.3.3 The National Committees

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The National Committees shall be comprised of representatives from each of the Regular Member

institutions from the CATIE's member countries. These committees are responsible for coordinating the activities of the Network within each country, elaborating the annual work plans, coordinating activities of national interest with respect to the different bodies of the Network and seeing to it that the Network's agreements are carried out in each country. CATIE's representative shall act as the Technical Secretary of the National Committee in each of its member countries. The other functions of the National Committees shall be delineated in the bylaws.

3.3.4 The General Secretariat

The General Secretariat is the permanent coordinating entity of the Network's activities, as well as for the execution and follow-up of Assembly's agreements.

A. Mission.

To assure the effective operation of Network by promoting horizontal interaction, facilitating inter-institutional communication and carrying out activities of coordination and follow-up.

B. Functions

- i. To guarantee a continuing exchange of educational scientific and technological information.
- ii. To conduct a system of communication which will enable inter-institutional relations on a horizontal level.
- iii. To maintain contact with other organizations and networks within and outside of the region.

- iv. To support CATIE in the implementation of its strategy of ongoing consultation with its member countries in the areas of education, research and extension.
- v. To prepare and keep up to date records on the institutions that make up the Network.
- vi. To elaborate and distribute records on specialists within the various institutions.
- vii. To promote periodic technical meetings for the members of the Network.
- viii. To raise funds to sustain the regional activities of the Network.

C. Headquarters

The General Secretariat shall be exercised by CATIE, and its headquarters shall be at the Center in Turrialba, Costa Rica.

REDCAS'S REGULAR MEMBERS  
(NATIONAL INSTITUTIONS)

Costa Rica

Minister of Science and Technology  
(Ministerio de Ciencia y Tecnología)

National Council for Scientific and Technological Research  
(Consejo Nacional de Investigaciones Científicas y  
Tecnológicas, CONICIT)

~~National University~~  
(Universidad Nacional, UNA)

By-tutory State University  
(Universidad Estatal a Distancia, UNED)

Technological Institute of Costa Rica  
(Instituto Tecnológico de Costa Rica, ITCR)

Minister of Agriculture and Livestock  
(Ministro de Agricultura y Ganadería, MAG)

El Salvador

Minister of Agriculture and Livestock  
(Ministerio de Agricultura y Ganadería, MAG)

University of El Salvador  
(Universidad de El Salvador)

Central American University José Simeón Cañas  
(Universidad Centroamericana José Simeón Cañas)

Politechnic University of El Salvador  
(Universidad Politécnica de El Salvador)

Agricultural Technology Center  
(Centro de Tecnología Agrícola, CENTA)

Agricultural Training Center  
(Centro de Capacitación Agropecuaria, CENCAP)

Guatemala

Minister of Agriculture and Livestock  
(Ministerio de Agricultura y Ganadería, MAG)

Institute of Science and Agricultural Technology  
(Instituto de Ciencia y Tecnología Agrícola, ICTA)

University of San Carlos  
(Universidad de San Carlos)

Rafael Landívar University  
(Universidad Rafael Landívar)

Del Valle University  
(Universidad del Valle)

BEST AVAILABLE DOCUMENT

Honduras

Minister of Natural Resources  
(Ministerio de Recursos Naturales)

National Autonomous University of Honduras  
(Universidad Nacional Autónoma de Honduras)

Pan American School of Agriculture  
(Escuela Agrícola Panamericana, EAP, "El Zamorano" )

National School of Agriculture  
(Escuela Nacional de Agricultura, ENA)

National School of Forestry Sciences  
(Escuela Nacional de Ciencias Forestales, ESNACIFOR)

Nicaragua

Minister of Agricultural Development and Land Reform  
(Ministerio de Desarrollo Agropecuario y Reforma Agraria, MIDINRA).

National Council of Higher Education  
(Consejo Nacional de Educación Superior, CNES)

Autonomous University of Nicaragua  
(Universidad Autónoma de Nicaragua)

National Autonomous University of Nicaragua  
(Universidad Nacional Autónoma de Nicaragua)

Central American University  
(Universidad Centroamericana, UCA)

Institute of Agricultural Sciences  
(Instituto Superior de Ciencias Agrícolas, ISCA)

International School for Agricultural and Livestock  
(Escuela Internacional de Agricultura y Ganadería)

Politechnic University of Nicaragua  
(Universidad Politécnica de Nicaragua)

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Popular Center of Higher Education  
(Centro Popular de Educación Superior, CEPES)

Panama

Minister of Agricultural Development  
(Ministerio de Desarrollo Agropecuario, MIDA)

Institute of Agricultural Research  
(Instituto de Investigación Agropecuaria, IDIAP)

Universidad de Panamá  
(Universidad de Panamá, UP).

Santa María la Antigua University  
(Universidad Santa María la Antigua, USMA)

Technological University of Panama  
(Universidad Tecnológica de Panamá)

National Institute of Renewable Natural Resources  
(Instituto Nacional de Recursos Naturales Renovables,  
INRENARE)

Institute for Development and Utilization of Human Resources  
(Instituto para la Formación y Aprovechamiento de  
Recursos Humanos, IFARHU)

República Dominicana

State Secretariat for Agriculture  
(Secretaría de Estado de Agricultura, SEA)

National Council for Higher Education  
(Consejo Nacional de Educación Superior, CONES)

Autonomous University of Santo Domingo  
(Universidad Autónoma de Santo Domingo, UASD)

Dominican Republic Association of University Rectors  
(Asociación Dominicana de Rectores de Universidades,  
ADRU)

Pedro Henríquez Ureña National University  
(Universidad Nacional Pedro Henríquez Ureña, UNPHU)

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Mother and Master Catholic University  
(Universidad Católica Madre y Maestra, UCMM)

Technological Institute of Santo Domingo, INTEC  
(Instituto Tecnológico de Santo Domingo, INTC)

Central University of the East  
(Universidad Central del Este)

APEC University  
(Universidad APEC)

Northeastern University  
(Universidad Nordestana)

Iberoamerican University  
(Universidad Iberoamericana)

Technological University of Cibao  
(Universidad Tecnológica del Cibao, UTECI)

Technological Institute of Eastern Cibao  
(Instituto Tecnológico del Cibao Oriental, ITECO)

Agricultural Higher Education Institute  
(Instituto Superior Agropecuario, ISA)

Salesian Agronomic Institute  
(Instituto Agronómico Salesiano)

Agronomic Institute S. Ignacio de Loyola  
(Instituto Agronómico S. Ignacio de Loyola)

Loyola Politechnic Institute  
(Instituto Politécnico Loyola)

REDCA MEMBERS OF THE SUB-NETWORK OF AMERICAN UNIVERSITIES

University of Wisconsin

Cornell University

Iowa State University

University of Florida

Colorado State University

University of Missouri

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**EVALUATION SCOPE OF WORK**

- b) that the projected number of graduates has been achieved;
  - c) that all planned construction has been completed satisfactorily;
  - d) that the student body is characterized by a predominance of individuals from the Central America and Panama region, but includes students from other CATIE member countries, such as the Dominican Republic; and
  - e) that the institution's long-range planning includes evidence of ample coordination and consistency with human resource needs of the Central America and Panama region, as identified by the respective governments.
3. The consistency of CATIE's institutional philosophy is to be reviewed in terms of AID's regional development objectives in the agricultural and education sectors. (See January 1991 A.I.D. Washington D.C. Economic Assistance Strategy for Central America 1991-2000.)
  4. The experiences of this project have long-term implications for CATIE in their mission to support sustainable agriculture and natural resource management activities in the region. A "lesson learned" Section is to be prepared by the consultants to help CATIE in this transformation.

### III. STATEMENT OF WORK

A team of five specialists will review information with CATIE's concurrence related to the A.I.D. financed Part A of the Regional Agricultural Higher Education Project and perform a final evaluation of this activity. The team will use this information to assess project efficiency and performance, effectiveness in reaching stated objectives and the long-term development goals of the institution. The team will critique the project strategy and management characteristics that are directly related to performance and they will prepare a "lessons learned" section which will assess the project in terms of what worked, what did not work, and why.

Since this is a final evaluation of the Project, the team will investigate and prepare findings concerning the activity since inception in 1985.

The evaluation will focus on the following:

1. Overall Project Management and Resource Allocations

- Examine the structure and effectiveness of CATIE. Include the relevance of the following factors to the management of the project:
  - a) delegation of authority, accountability
  - b) management style, systems, leadership
  - c) planning and budgetary practices
- Review the institutional policies and their practices as related to the Project. Include:
  - a) human resources recruitment, retention, compensation and professional growth practices
  - b) student selection -criteria and progress
  - c) outreach and communications -linkages to the region and beyond
- Assess the financial viability and management of the post-graduate program at CATIE. Include influence of Project as related to:
  - a) near term effects on income and expenditure outlook of the institution
  - b) financial controls and auditing of the post-graduate program
  - c) long term financial environment of the institution including foundation funding, scholarship and financial assistance for students, career development of the professional staffs and administrative support services
  - d) long term financial requirements for physical maintenance and repairs.

This section will be primarily the responsibility of the Chief of Party/Academic Administration Specialist with significant inputs from the Financial Analyst(s) and some inputs from the Networking Specialist.

2. Local Currency Utilization

The evaluators will review, analyze and determine CATIE's compliance with the AID/CATIE MOU No.21 and CATIE's use of local currency trust funds for the agreed upon purposes. The purpose of CATIE Agreement (MOU No. 21) dated May 14, 1985 is to assist CATIE in expanding and strengthening the scope and relevance of its training. The term of this agreement is May 14, 1985 to May 13, 1993 with the source of the support being the AID/FEDECOOP Special

Trust. The official representatives are the Director, USAID/Costa Rica and the CATIE Director. The ROCAP Director was named as an additional representative November 10, 1988.

This agreement has a special covenant which states that during the last 12 months of the agreement, the continuation of CATIE as a beneficiary will be reviewed. This includes the terms and conditions under which CATIE would remain as the beneficiary and receive income generated by the Trust Fund. The MOU then specifies the criteria upon which the review by AID will be based. Among others, the MOU requires that the review will be made within the context of CATIE's overall financial viability and progress in broadening its revenue base through a fund raising program and by increasing farm produce sales.

Facilities and Equipment (Physical Infrastructure)

- Review the design, procurement, construction and financed criteria of all facilities provided by both local currency and dollar funds under the Project. Specifically examine:
  - 1) construction activities actually accomplished as related to the approved Master Plan
  - 2) cost factors and quality control procedures. (Review performance of construction contractors)
  - 3) End-use performance of each facility or physical system (water/electricity) constructed, repaired or upgraded under the project.
  
- Determine compliance with CATIE's approved procurement system and procurement procedures for all in-country equipment, supplies and services provided for under Project which used local currency and/or U.S. dollars.

Assess the effectiveness of internal controls over procurement and expenditures; Include:

  - 1) vehicles
  - 2) computer equipment/supplies
  - 3) audio-visual equipment and training aids
  
- Examine CATIE planning and budgetary records that relate to maintenance and repair concerns. Include:
  - 1) maintenance staffing and training
  - 2) maintenance financial projections and analysis

This section will be primarily the responsibilities of

the Financial Analyst(s) who will consult periodically with the other evaluation team members.

3. Staff Development (post-graduate programs)

- Assess the program stability and continuity of CATIE's higher education staff. Include:
  - a) staff recruitment, selection, retention
  - b) staff professional growth needs, training and support requirements
  - c) subject matter relevance, instructional philosophy
  - d) research/teaching proportionalities and graduate student counseling/supervision
  
- Review impact of Project resources to strengthen key departments in their teaching and research commitment. Include:
  - a) Animal Production Department
  - b) Plant Production Department
  - c) Renewable Natural Resources Department
  - d) The Computer Center

This section will be primarily the responsibility of the Chief of Party/Academic Administration Specialist in close collaboration with the Human Resources and Development Specialist.

4. Human Resources and Development

- Review the Graduate Studies and Training Department at CATIE. Emphasis will include:
  - a) progress in the development and implementation of the curriculum;
  - b) curriculum content relevance and compliance to CATIE's mandate;
  - c) formal instruction in relation to use of laboratories, library, shops, computers and the experimental farm.
  
- Examine the non-degree training programs. Include:
  - a) in-service training seminars financed under the project;
  - b) short courses, workshops and seminars financed by other donors using the CATIE Graduate Studies and Training Department.

Assess performance of the CATIE Development Office and the programs of the Director of Alumni Affairs. Specifically review:

- a) the Development Office effectiveness in carrying out major gifts programs, special consultation programs and corporate relations activities which enhance CATIE's financial self-sufficiency;
- b) progress towards developing a foundation or endowment mechanism for CATIE;
- c) status of the development/publications and promotions programs.

The Human Resources and Development Specialist will be responsible for this evaluation component and will work closely with other team members - especially the Networking Specialist and the Chief of Party/Academic Administration Specialist. It is particularly important this section give clear messages as to the long-term sustainability of these programs and their interface to support outreach programs.

#### 5. Networking

- Review the progress of the program and professional linkages with other institutions and programs within the region and outside the region. Include:
  - a) relationships to the CGIAR institutions such as CIMMYT and CIAT;
  - b) linkages to U.S. Universities (e.g. North Carolina State, Florida) and various private institutes;
  - c) other regional research/training institutions;
  - d) associations with regional public sector institutions;
- Assess quality of CATIE research programs that have been strengthened through professional relationships with peer groups.
- As part of networking visitations in the region, examine progress of CATIE's alumni research activities and alumni relationships.

The Networking Specialist will be the primary evaluator

for this section and will interface with the other specialists as appropriate. The travels of the specialist within the region will require close planning and coordination with those CATIE personnel involved in regional activities.

#### 6. Lessons Learned

This is the final evaluation of an A.I.D. financed "institution building" project. While this evaluation effort serves as a basis for forming judgments about program and project efficiency and performance, meeting stated objectives and impact on development goals; its greater utility is what this evaluation can do for CATIE in enhancing and strengthening its institutional mandate over the long term.

Therefore, the evaluators will identify in a final section of this evaluation some lessons that were learned during the life of the project which could directly benefit the institution in the future.

This may include:

- a) Specific approaches or activities that succeeded while others did not.
- b) Describing problems that took place during the life of the project and had a significant influence in meeting stated goals or objectives. (It is not helpful just to inventory what did or could go wrong.)
- c) Choices between the type and quantity of inputs needed to produce a desired outcome. (Financial/management mechanisms and mixes of external/internal technical assistance.)
- d) Time delivery. As much as people want change, attitudes and structures play an important part as to how much can be accomplished in a given period of time.
- e) The social and political will. Based on project experiences how effective can/will the institution be in taking charge of its own destiny?

This section will be prepared by the Chief of Party with inputs from all the consultants.

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**EVALUATION REFERENCE DOCUMENTS**

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**ANNEX 20**  
**REFERENCE DOCUMENTS**

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**CATIE Documents**

Annual reports  
CATIE contract—the original signed by IICA and the Government of Costa Rica in 1973 and modifications approved by Inter-American Board of Agriculture, 1991  
External reviews  
General regulations  
Personnel regulations  
Procurement regulations  
Programming and budget documents  
Recruitment manual  
Strategic plans  
User's Guide for Integrated Financial Information System (SIIF)

**CATIE Publications**

Alumni lists  
Graduate education and training programs  
Project proposals  
Project reports  
Staff lists  
Theses  
*Redes de Investigacion Agropecuaria en America Central: Una Respuesta al Reto de la Sostenibilidad*, CATIE, Turrialba, Costa Rica, 1991.  
"Toward Sustainable Agriculture in Central America: A Research Agenda," Rodrigo Tarte, CATIE, October 1990.

**Regional Agricultural Higher Education Project**

Annual Work Plans and Quarterly Reports  
Project Implementation Letters (PILs)  
Project Paper  
Project Paper Amendment (July, 1991)  
Report on Achievements of the MS Program to date

## **REDCA**

Aide-mémoire of annual meetings

Internal and external correspondence

"Estrategia de Desarrollo de REDCA (Propuesta para discusión)," paper prepared by the Costa Rica National Committee and presented at the 1992 REDCA annual meeting.

## **OTHER**

Audit Study of Overhead Rates

PASE: Annual listings of M.S. graduates, 1989-1992