

PROJECT EVALUATION SUMMARY (PES) - PART I

1. PROJECT TITLE <b>DD-AAM-488</b>  Fuelwood and Alternative Energy Sources - ICAITI	2. PROJECT NUMBER <b>596-0089</b>	3. MISSION/AID/W OFFICE <b>ROCAP</b>
	4. EVALUATION NUMBER (Enter the number maintained by the reporting unit e.g., Country or AID/W Administrative Code, Fiscal Year, Serial No. beginning with No. 1 each FY) <b>83-2</b>	
<input checked="" type="checkbox"/> REGULAR EVALUATION <input type="checkbox"/> SPECIAL EVALUATION		

5. KEY PROJECT IMPLEMENTATION DATES			6. ESTIMATED PROJECT FUNDING		7. PERIOD COVERED BY EVALUATION	
A. First PRO-AG or Equivalent FY <b>79</b>	B. Final Obligation Expected FY <b>84</b>	C. Final Input Delivery FY <b>85</b>	A. Total	<b>\$ 4,028,000</b>	From (month/yr.)	<b>Sept. 1979</b>
			B. U.S.	<b>\$ 3,240,000</b>	To (month/yr.)	<b>May 1982</b>
					Date of Evaluation Review	<b>July 20, 1982</b>

8. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR

A. List decisions and/or unresolved issues; cite those items needing further study. (NOTE: Mission decisions which anticipate AID/W or regional office action should specify type of document, e.g., airgram, SPAR, PIO, which will present detailed request.)	B. NAME OF OFFICER RESPONSIBLE FOR ACTION	C. DATE ACTION TO BE COMPLETED
Present new work plan and incorporate any changes in objectives	Nadeau/ROCAP	Dec. 1982

9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS			10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT		
<input type="checkbox"/> Project Paper	<input checked="" type="checkbox"/> Implementation Plan e.g., CPI Network	<input type="checkbox"/> Other (Specify)	A.	<input type="checkbox"/> Continue Project Without Change	
<input checked="" type="checkbox"/> Financial Plan	<input type="checkbox"/> PIO/T	_____	B.	<input type="checkbox"/> Change Project Design and/or	
<input type="checkbox"/> Logical Framework	<input type="checkbox"/> PIO/C	<input type="checkbox"/> Other (Specify)		<input type="checkbox"/> Change Implementation Plan	
<input type="checkbox"/> Project Agreement	<input type="checkbox"/> PIO/P	_____	C.	<input type="checkbox"/> Discontinue Project	

11. PROJECT OFFICER AND HOST COUNTRY OR OTHER RANKING PARTICIPANTS AS APPROPRIATE (Names and Titles)

*Rafael Franco*  
- **Rafael Franco**  
Evaluation Officer

12. Mission/AID/W Office Director Approval

Signature: *Paul A. Montavon*

Typed Name: **Paul A. Montavon**

Date: **1/17/83**

### 13. Summary

Accomplishments to date have been adequate, given the vagaries of technological development/adaptation even under optimal conditions. Hard working and capable technical staff carry out prototype construction, testing and demonstration activities in domestic and industrial stoves and kilns, solar and biogas technologies. However, certain factors tend to slow progress toward meeting project objectives. First, the lack of full-time field staff and the variety of counterpart organizations make for complex implementation arrangements. Also, there appears to be a tendency to follow the original project paper in terms of numbers of experimental and demonstration units to be installed in the various countries without clear perception of their present need and whether simultaneous experimentation/demonstration throughout the region dilutes available human energies and technical expertise. While the subproject has done an admirable job of attempting to fulfill all the activities outlined by the project paper, it would now be worthwhile to modify some of these objectives and even consider major programmatic changes of direction.

### 14. Evaluation Methodology

Because of the size and nature of the project involving two major regional institutions (CATIE and ICAITI) and field operations in five countries, it was necessary to rely on a combination of methods to evaluate the project:

1) A normative evaluation based on a review of available documents;

2) A performance evaluation based on an assessment of whether objectives stated in the project paper have been achieved or how they have changed; and

3) An impact assessment to determine if and how the project has led to changes when compared with the general state of the problem area identified at the beginning of the project.

In carrying out the evaluation, the team relied on three sources of inputs: documents, personal interviews and on-site visits with the latter receiving the greatest emphasis. The visits provided tangible evidence of what the project has achieved and facilitated the carrying out of the performance evaluation.

### 15. External Factors

Technological development, adaptation, and transfer even under the best of conditions, is always an arduous and time-consuming process.

For this project, the result has been slower than expected progress in carrying out many of the planned activities.

## 16. Inputs

Delays in project implementation are not attributed to the quantity and timeliness of project inputs but to the nature of the subproject which has made it difficult in locating individuals with strong technical backgrounds in renewable energy technologies.

## 17. Outputs

Accomplishments to date have been adequate. However, factors such as the lack of full-time field staff and the tendency to take on too many activities simultaneously has diluted the effectiveness of the technical expertise and has resulted in slower than expected progress.

Also, results from subproject activities to date (with the exception of the stove construction manual) are not yet available in published form. ICAITI should investigate ways to disseminate information at national levels.

The five main areas of project activities are:

### 1. Improved Fuelwood Efficiency

Fourteen stove prototypes (four more than planned) were studied and tested. Five of them were selected and are now being built in all participating countries.

### 2. Industrial Combustion

The design of oven/kilns has been completed for all countries except El Salvador, and construction is in various stages in the different countries.

### 3. Policy Study

First draft has been completed and submitted to ROCAP for review.

### 4. Training of Regional Personnel

The First Regional Training Seminar/Workshop in stove construction for counterpart personnel was held in Guatemala. Four countries participated with an average of seven persons per country. A second seminar on how to design, build and use stoves was held in El Salvador.

## 5. Financial Management Assistance

Early in the project, Coopers and Lybrand carried out a Financial Management Study. The report included recommendations for improved financial accounting methods and management procedures. As a result of this study, ICAITI entered into a contract with a management consulting team from the Montana Energy and MHD Research and Development Institute (MERDI), Butte, Montana, to implement the recommendations.

### 18. Purpose

To develop efficient low cost domestic, small community and small and medium industrial fuelwood and non-conventional energy technologies.

### 19. Goal

The goal of the project is to improve the welfare and productivity of low-income groups and increase the supply of low-cost energy for rural and urban poor.

To contribute to the sector goal, ICAITI has tested, disseminated and evaluated non-conventional and low-cost technologies which use wood and alternate renewable energy sources for use in the home, on the farm and by small and medium industry.

### 20. Beneficiaries

The project will support a number of energy efficient technology alternatives. The most widespread of these, having direct application in the home, is the stove demonstration program. Four hundred and fifty units will be tested in rural homes during the project reaching over 3,100 families. Other energy efficient devices will also have a direct impact on the target group.

The project will also strengthen research and outreach institutions and personnel who are involved in the cultivation and technology development and dissemination of low-cost energy technologies.

### 21. Unplanned Effects

None

22. Lessons Learned

National entities should be actively involved starting early in the project life. The lack of commitment by national entities not only results in the decline of the activity following cessation of external funding, but affects the level of progress during project implementation.

23. Special Comments or Remarks

The original project objectives have been found to be too ambitious, and appropriate modifications taking into account experience to date and reasonable expectations for achievements over the remainder of the project are being considered. Programmatic changes consistent with these modifications will be made as appropriate.