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**PROJECT CLOSE OUT REPORT**

**HONDURAS RURAL TECHNOLOGIES PROJECT**

**522-0157**

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522-0157

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#### **I. BACKGROUND**

The Rural Technologies Project (PTR) was authorized in 1979. At that time, the Government of Honduras (GOH) had approved the increase of employment and income in the farm sector through the development and delivery of appropriate technologies as one of its development goals. An integral part of the USAID/Honduras Mission strategy for agricultural development was the development, adaptation and delivery of appropriate technologies to small farmers. As a complementary action for reaching the nonfarm rural poor, the GOH and the Mission emphasized the delivery of these types of technologies to small, rural industries and rural households. The project included the rural households as part of the beneficiaries with the purpose of improving the quality of life of the rural poor and the use of family resources.

The key problem of the target group was the lack of access to new or improved technologies, technical assistance, and information. The strategy used to solve this problem was the creation of systems that identified the constraints and helped develop, adapt and deliver technologies to fit the needs and conditions of the target group.

The project design included the necessary institutional strengthening within the GOH to provide the systems and mechanisms to develop and disseminate light capital technologies to the target group.

The project supported and complemented other GOH programs and USAID projects that were key elements of the Mission's Agricultural Development Strategy to improve the efficient use of land and labor, increase employment and incomes, and enhance the quality of rural life. Those projects included the Rural Housing, Agricultural Sector II, Small Farmer Coffee Improvement, and Natural Resources Management Projects.

The Project Agreement was signed on September 26, 1979. The original Project Assistance Completion Date (PACD) was September 24, 1984, but was extended twice; first to September 24, 1988, and later to December 31, 1988. During the life of the project, the GOH provided \$14,388,050 equivalent in local currency as counterpart funds, which exceeded the \$6,247,300 required by the Project Agreement and Extensions by \$8,140,750.

## II FINANCIAL DATA

<u>Dates of Authorization:</u>	<u>Amounts Authorized:</u>
August 7, 1979 (Original)	\$5,000,000 (G)
August 27, 1984 (Amendment)	\$4,000,000 (G)
Total	\$9,000,000 (G)

### Dates of Obligations:

September 25, 1979 (Original)	\$ 850,000 (G)
January 10, 1980 (Amendment No.1)	1,900,000 (G)
March 6, 1981 (Amendment No.2)	1,000,000 (G)
August 30, 1982 (Amendment No.3)	250,000 (G)
June 1, 1983 (Amendment 4)	250,000 (G)
November 10, 1983 (Amendment No.5)	750,000 (G)
August 31, 1984 (Amendment No.6)	550,000 (G)
January 2, 1985 (Amendment 7)	1,500,000 (G)
March 15, 1986 (Amendment No.8)	1,950,000 (G)
Total	9,000,000 (G)

### Counterpart Contribution:

In Local Currency Equivalent	\$14,388,050 (G)
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## III PROJECT GOAL AND PURPOSE

The Goal of the project was to increase the income of small farmer and rural businesspersons, and improve the quality of life in the rural sector of Honduras. The Project had three complementary purposes: (1) increase small farmers' effective use of labor and land by using improved light capital farm implements and structures (considering the impact of imported energy); (2) increase small scale rural industrial productivity and employment by introducing improved production and management systems in the existing small enterprises, and by establishing new pilot enterprises; and (3) increase the use of low cost appropriate technologies designed to improve the quality of life of the rural poor.

## IV PROJECT DESCRIPTION

The project originally consisted of ten components or activities which were increased in 1984 to the following eleven:

- 1) Adaptive Research and Information Networks
- 2) Center for Industrial Development (CDI) Service Program Activity
- 3) Farmer and Entrepreneurial Training
- 4) Small Enterprises Development Fund
- 5) Appropriate Technology Development, Adaptation and Dissemination
- 6) Human Resources Development
- 7) Small Industry Advisory Office
- 8) CDI Studies Division
- 9) Ministry of Economy (MOE) Policy Analysis Unit
- 10) Coordination, Management and Administration
- 11) Credit Fund

A Project Office was established in Tegucigalpa to manage and implement project activities under the administrative authority of CDI. The original project agreement assigned the responsibility of project implementation to six GOH institutions. After the first two years, this arrangement proved to be cumbersome, overly bureaucratic, and expensive. Consequently, the GOH and the USAID Mission, in accordance with an evaluation recommendation, decided to streamline operations, and assigned the implementation of the project to CDI and the Ministry of Natural Resources (MNR). The CDI became the lead institution and the MNR established the Development and Adaptation Unit for Agricultural Technologies (UDA) in Comayagua, which trained the rural mechanics and blacksmiths who produced agricultural tools. The Adaptation Unit depended administratively from the MNR and financially from the Rural Technologies Project (PTR).

The Project opened six regional offices covering practically the whole country to reach its clientele, and assisted in the technologies diffusion by producing instructive manuals or pamphlets for all major technologies disseminated.

## **V CURRENT PROJECT STATUS**

The Project expiration date was December, 1988, but the GOH has continued to finance PTR as a rural technologies program, which currently assists rural, small industries and enterprises only; and the rural households and small farmers are assisted by several other MNR projects, such as the Land Use and Productivity Enhancement Project (LUPE).

## VI OUTPUTS

As shown in the following table, the Project exceeded project life targets in all major outputs.

<u>Output</u>	<u>LOP Target</u>	<u>Accomplished</u>	<u>% of Target Accomplished</u>
- Small farmers benefitted	14,000	17,702	126
- Small Rural Industries			
- Export Industries			
- Number of Industries	20	38	190
- Families benefitted	360	308	86
- Local market and support industries			
- Industries	90	1,328	1,475
- Families benefitted	1,640	3,984	242
- Rural Homes Improved			
- Families benefitted	3,700	8,734	236

The LOP target on families benefitted by the small export rural industries, was not met because when the project was designed, it was projected that each small rural export industry would generate an average of 18 permanent rural jobs, which was a very ambitious target for small rural industry development. When the project was implemented, an average of eight jobs were created by each export industry. This was an impressive accomplishment for rural small scale industries.

## VII EXTENT TO WHICH THE ORIGINAL PROBLEM HAS BEEN SOLVED

The key problem addressed by the project was the lack of access to new or improved technologies by the target groups (small farmers, small rural industries and rural households). By adopting the Farming Systems Methodology (FSM), the Project was able to focus its efforts in the most profitable areas for project interventions using mass dissemination of appropriate technologies in rural areas. The Project proved that it is both technically and economically feasible to reach the farm and nonfarm rural poor with appropriate technologies aimed at increasing employment and income, and enhance their quality of life.

The final evaluation shows that the project reached about 6% of Honduras' rural population (approximately 157,951 direct and indirect beneficiaries). It also proved that the project was economically feasible with a cost/benefit ratio of 1:1.39, without considering any rate

of diffusion. The average increase of income per beneficiary was substantial, with monetary gains of \$195 per year. These figures are significant for this type of project, but larger interventions would be required to reach a higher percentage in a shorter time span. The financial sustainability of this project intervention (beyond PACD) would depend on the priority that the GOH and donor agencies assign to PTR and/or other development projects with same characteristics.

## VIII EVALUATION AND AUDITS

Three external evaluations and one audit review were carried out during the life of the Project. The first evaluation was done by Development Associates Inc., who submitted a report to the USAID Mission on July 15, 1983, covering the period from the start of the project on September 1979 to June 1983. The objectives of the report were to (1) assess the support and capabilities of the collaborating GOH entities; (2) assess the CDI/PTR capabilities to conduct program implementation; (3) evaluate the use of PVO's as part of the implementation strategy; and (4) determine the economic and other benefits gained from the disseminated technologies, and whether the program should be extended.

The evaluation confirmed that the project had a slow start and that the coordination of six GOH implementing agencies was slow, cumbersome and expensive, and recommended to work with only two implementing agencies, CDI and the MNR. Other important recommendations were: (1) to expand the agricultural component; (2) focus rural industries contribution to the increase of agricultural production; (3) provide the staff with job security and continuity, and shield it from political interventions; (4) explore the possibility of organizing the program under a foundation status; (5) add a credit component to the program; and, (6) extend and expand the project. All the evaluation recommendations were carried out, except the one of privatizing PTR.

The Office of the United States Inspector General for Investigation conducted an Audit Review of the program during the third quarter of 1985 and submitted a report on September 27, 1985. According to the report, relatively few high priority technologies in agriculture and rural industries had been disseminated and many of them were not working. On the other hand, it stated that many simple and potentially cost reducing household technologies had been disseminated.

The USAID Mission was concerned about the findings of the review, especially with regards to the challenges made to the viability of the technologies, and contracted Winrock International to conduct a nonscheduled evaluation of the project. A comprehensive evaluation was conducted from December 6, 1985 to March 8, 1986. This evaluation cited as weaknesses the high turnover of managers and key staff; the excessive number of technologies that the project was using; and the lack of specialized technical assistance in the areas of small irrigation, food processing, and marketing. On the other side, it recognized that the FSM had made a dramatic impact on the project; credit had played a critical role for PTR successes; and PTR had established a useful and productive

relationship with PVO's, who were contributing to the achievement of the overall project objectives. Also, a recommendation was the possible privatization of PTR through the establishment of a foundation. Thirteen of the fourteen recommendations were carried out. The exception was recommendation No.12 dealing with the possibility of reorganizing PTR as a private foundation. The GOH high level officials responsible for PTR refused to consider this option, arguing that the project was an example of outstanding public sector performance and that the GOH had planned to continue its operations beyond PACD as a rural technology program.

A final external evaluation was conducted by The Institute for Development Anthropology from October to December, 1988, who submitted a report on December 10, 1988. The evaluation assisted the USAID Mission and the GOH in summarizing and assessing almost a decade of efforts in assisting the rural households, small farms and rural enterprises and industries of Honduras. Most important, it brought out the "lessons learned" from those experiences and the recommendations that these experiences suggested for future technology transfer interventions. The purpose of the evaluation was: (1) to summarize project implementation over the nine years of project life; (2) evaluate project impacts from social, economic, technical and institutional perspectives; (3) evaluate the project's use of private voluntary organizations and credit mechanisms; and (4) provide policy and implementation recommendations for future technology and small enterprise projects.

The evaluation concluded that the project had effectively reached its target groups. Although gender disaggregation was only available in the credit component, which showed that 20% of the participating beneficiaries were women, 28% of the technologies introduced by the project were rural household technologies that benefitted mainly women.

Those technologies contributed to improve the quality of life of the rural family, and consisted in activities such as home gardens that included new cultivars designed for home production of fruits and vegetables; home improvement activities such as room divisions, stackable beds<sup>1</sup>, Lorena stoves, waste disposals, french drains, water collection and purification; and small animal husbandry activities such as poultry and veterinary technologies. In addition to these activities, women actively participated in small rural industry development, being the range and variety of their intervention in this type of activity very broad. They organized cooperative groups called "Clubes de Amas de Casa" (housewives' clubs) and other informal groups to carry out profit related activities such as bakeries, vaccination enterprises, cast aluminum products, candy making, ceramics, yucca shredding, etc. Most of these enterprises were successful and contributed to raise the living standard of their families.

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<sup>1</sup> Stackable beds are beds made to fit one underneath the other. They can be made in sets of up to three beds and are stacked one on top of the other to save space during the day.

Some of the most important conclusions of the final external evaluation follow.

- On the economic side, the results were positive. The project had a cost/benefit ratio of 1:1.39 without diffusion. The average income per participant increased to \$195 and the average technology produced a yearly increase of \$115.
- The project had little impact on institutional building, nor was it intended.
- UDA, the research and development unit created at the beginning of the project to develop agricultural technologies, was administratively dependent on the MNR but financially dependent on PTR. This arrangement created tension between the two institutions (PTR and the MNR) and, as a result, UDA never fully identified itself with the project and its objectives.
- Timely access to operating funds is vital for good project performance. Bureaucratic delays adversely affect the technician-beneficiary relationship.
- A project must be sheltered from political interventions in order to have continuity and maintain competent staff. PTR had seven managers in nine years, resulting in often dramatic changes in program operations. This climate created insecurity and led technicians to leave the project for more secure jobs.
- The setting of agricultural service industries in private hands was successful. The vaccination of poultry and pigs, the crop fumigation, land preparation and the sale of agricultural inputs are examples of the types of privately owned industries that add to agricultural production and productivity.
- The energy oriented technologies promoted by the project proved to be effective and provided beneficiaries with alternatives for saving fuelwood.
- Although PTR was weak in its information dissemination systems, the findings of the evaluations indicated that it did reach the audiences that could put its technologies to best use, thus contributing to improvement of the quality of life of the participating families. The introduced technologies assisted the rural families to make household chores less tiresome and improve their health and sanitation status.

## IX FINANCIAL STATUS

<u>SOURCE</u>	<u>OBLIGATED</u>	<u>COMMITTED</u>	<u>DISBURSED</u>	<u>UNEXPENDED</u>
Grant	\$9,000,000	\$9,000,000	\$8,851,972	\$148,028 (1.6%) <sup>2</sup>

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<sup>2</sup> Deobligated funds were used to finance other Rural Development projects.

## **X LESSONS LEARNED**

The PTR experience provided several lessons that can be transferred to other projects engaged in promoting technical change among poor sectors of the rural populations. The following pages highlight some of the most important ones:

### **Institutions and Management**

The number of public implementing agencies should be as few as possible to avoid problems of coordination or of destructive political interventions. The history of PTR over the past nine years has been to either eliminate public institutions from the project or to move project functions away from them toward private institutions.

The project should be careful in not to divorce financial from administrative authorities. The unit for adaptation of technologies, UDA, has been administratively dependent from the MNR since project initiation, but financially dependent of PTR. This caused UDA to experience competing program demands from the two authorities. This type of arrangement created tensions between PTR and the MNR, and UDA never identified itself with the project, which represents a flaw in the original design.

The project must be sheltered from harmful political interventions that contributed to a high turnover of technical personnel to have program continuity and to maintain competent staff.

In the future, USAID funding of projects such as PTR should be contingent upon the GOH's prior fulfillment of certain conditions. The GOH should prepare a detailed plan and submit it for AID's approval, specifying which actions will be taken to turn the project into an autonomous institution, or, at least buffer it against political-bureaucratic intrusions. At the very least, the plan should provide for the hiring of independent, politically unaffiliated Manager and Assistant Manager, who should be hired based on technical qualifications and for longer periods (at least three years). Furthermore, the staff should be provided guarantee of job security.

### **Credit**

It is possible to link credit and technological change. Although most of the projects that have promoted credit and technical change have failed, what sets PTR apart is the use of the FSM. This system allows farmers to have a voice in the design of technologies and, to a large extent, in the design of the credit program. Without knowing it, PTR has shown how FSM methods can be applied to credit.

Credit intermediation is possible. The basis for a good relationship with private banks is the use of profitable interest rates and the ability of PTR staff to select potential credit users. PTR's overall portfolio has survived with an approximately repayment rate of 90%. It is recommended to do some research on credit and on new ways to deal or prevent default and reduce operational costs. The credit department should be audited frequently to assure constant statistical feedback. Automation will be necessary in field offices if their growth rate continues.

The project should increase its bottom-up approach for implementation, and set up frequent meetings with its users and field staff to find out how to improve credit management and delivery.

### Technologies:

Projects such as PTR, should undertake early professional social analyses to be able to track down the technology transfer process. This critical feedback from a social viewpoint would result in cost savings. A tighter focus on the type of technologies generated would reinforce the PTR sensitivity to technology designs made according to the real world's socioeconomic, ecological, and gender diversity needs of the target population. PTR needs to strengthen its reporting and information dissemination systems to make sure that its findings and experiences reach audiences within the donor or host country agencies that can better use the new technologies.

In the future, projects should seek to retain some of their focus on appropriate household technologies in ways that are compatible with other mandates. This would provide the advantage of easy entry, gender equity, and energy and natural resources conservation that this component offers.

Any future projects should incorporate PTR's flexibility and openness to users' feedback in the design/development/delivery process as well as its model of building upon local practices and technologies. They should also use existing socio-economic organizations wherever possible.

At a broader level, future efforts on technology design should closely attend to features that characterize PTR's successes: affordability, life quality enhancement, risk reduction, comprehension and ease of access, income generation, good fit with present farming and wage-labor patterns, and readily visible results.

### PVO's / NGO'S:

The project should examine alternative means for supporting NGO's/PVO's in technology transfer, and develop financial links with umbrella organizations such as FOPRIDEH, ANDI/PYME. PVO's and NGO's assisted PTR in amplifying the project outreach in areas

where PTR was not working. However, future contractual relationships should ask that the technical staff of these organizations be trained in good accounting practices, computer utilization, and technology transfer processes.

### Technology Generation and Extension:

Several lessons are associated with the project adoption of the FSM in 1984:

- The FSM approach should have been adopted at the beginning of the project. PTR could not work effectively without a well defined methodology, and FSM provided such a methodology. The FSM requires an initial diagnosis of clientele needs and practices (community survey), followed by a period of testing the technologies, obtaining clients feedback, and analyzing the adoption of the new technologies. This process, which may take from one to three years, conflicts with conventional USAID practices of setting numerical goals that must be achieved in yearly steps. The technical staff working on such projects face too much pressure to meet yearly quotas, and often pursue them with reckless desperation as happened in PTR. Without such pressure, project staff could be engaged in understanding current client practices and needs, and develop appropriate technologies to which to respond.
- Once the technologies are developed and designed for a large homogeneous target group, the technologies will spread quickly and without much extension work, The returns from FSM are low in the short term, but raise dramatically over the long range (over a three-year period).
- Beneficiaries must participate in the technology adaptation process. PTR should work with the needs felt by rural beneficiaries, and should not work on the basis of what the technical staff thought beneficiaries needed, as it did during its early years of operation. There is a close relationship between technology generation and extension and the amount of training received by field personnel.
- Systematic and relevant in-service training is important in this regards, for both PTR staff and PVO's/NGO's.
- It is crucial to monitor and evaluate project implementation regularly. PTR should evaluate the impact of technology transfer based on the continuing presence of functioning technologies, and account also for those technologies that have been adopted spontaneously through the diffusion process.

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EXO:T.STEPHAN

June 17, 1992

Technology Generation and Extension:

Several lessons are associated with the project adoption of the ~~Farming Systems Methodology~~ (FSM) in 1984:

- The FSM approach should have been adopted at the beginning of the project. PTR could not work effectively without a well defined methodology, and FSM provided such a methodology. The FSM requires an initial diagnosis of clientele needs and practices (community survey), followed by a period of testing the technologies, obtaining clients feedback, and analyzing the adoption of the new technologies. This process, which may take from one to three years, conflicts with conventional USAID practices of setting numerical goals that must be achieved in yearly steps. The technical staff working on such projects face too much pressure to meet yearly quotas, and often pursue them with reckless desperation as happened in PTR. Without such pressure, project staff could be engaged in understanding current client practices and needs, and develop appropriate technologies to which to respond.
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June 17, 1992

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PROJECT COMPLETION CLOSE OUT REPORT  
HONDURAS RURAL TECHNOLOGIES PROJECT (522-0157)

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