

CLASSIFICATION
PROJECT EVALUATION SUMMARY (PES) - PART I

Report Symbol U-447

1. PROJECT TITLE RURAL TRAILS AND ACCESS ROADS			2. PROJECT NUMBER 522-0164		3. MISSION/AID/W OFFICE Honduras	
			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) <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 <u>80</u> B. Final Obligation Expected FY <u>85</u> C. Final Input Delivery FY <u>85</u>			A. Total \$28,250,000 B. U.S. \$21,200,000		From (month/yr.) <u>3/80</u> To (month/yr.) <u>9/83</u> Date of Evaluation Review <u>Review of draft report 10/83</u>	

B. 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
8.1. Road Reconstruction and Supervision		
1. Attract more experienced engineers to work with SECOPT.	C. Maxwell, ENG and C. Cárcamo, DGC-SECOPT.	On-going
2. Improve SECOPT's supervision system of field engineers.	C. Maxwell, ENG and C. Cárcamo, DGC-SECOPT.	Completed, 6/84
3. Institute the utilization of plans for roads to be reconstructed.	C. Maxwell, ENG and C. Cárcamo, DGC-SECOPT.	Completed, 7/84
4. Standardize supervision for field supervisors and prepare a new Manual of General Technical Specifications.	C. Maxwell, ENG and C. Cárcamo, DGC-SECOPT.	12/84
5. Allow field supervisors to introduce minor changes in road design as needs arise.	C. Maxwell, ENG and C. Cárcamo, DGC-SECOPT.	Completed, 3/84
6. Assure that all section of roads reconstructed comply with minimum maintenance requirements established by the General Maintenance Directorate.	C. Maxwell, ENG and C. Cárcamo, DGC-SECOPT.	On-going

9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS

<input type="checkbox"/> Project Paper	<input type="checkbox"/> Implementation Plan e.g., CPI Network	<input type="checkbox"/> Other (Specify) _____
<input type="checkbox"/> Financial Plan	<input type="checkbox"/> PIO/T	_____
<input type="checkbox"/> Logical Framework	<input type="checkbox"/> PIO/C	<input type="checkbox"/> Other (Specify) _____
<input type="checkbox"/> Project Agreement	<input type="checkbox"/> PIO/P	_____

10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT

A. Continue Project Without Change

B. Change Project Design and/or Change Implementation Plan

C. Discontinue Project

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

Ramiro Zúniga, Mario Barrientos, Melba Zúniga - Evaluators from Centro de Cómputo
 Carl Maxwell, USAID/H - Project Officer
 Carlos Cárcamo, SECOPT - Director of AID's Executing Unit
 Orlando Hernández, USAID/H - Evaluation Specialist

12. Mission/AID/W Office Director Approval

Signature: *Anthony J. Cauterucci*

Typed Name: Anthony J. Cauterucci

Date: 7/13/84

8.2. Road Maintenance

- | | | |
|---|---|--------------------|
| 1. Develop a social promotion plan to get community members involved in the necessary routine and preventive maintenance of roads reconstructed and create a special department within SECOPT to carry out this plan. | C. Maxwell, ENG
and C. Cârçamo,
DGC-SECOPT. | Completed,
6/84 |
|---|---|--------------------|

8.3. Impact

- | | | |
|---|---|--------------------|
| 1. Assure project impact by modifying project selection criteria to include current or anticipated development plans to be implemented by either public or private entities in areas where roads will be reconstructed. | C. Maxwell, ENG
and C. Cârçamo,
DGC-SECOPT. | On-going |
| 3. Establish a formal system for informing public institutions and the general public about the location and characteristics of roads reconstructed and the actions needed to magnify socio-economic impact. | C. Maxwell, ENG
and C. Cârçamo,
DGC-SECOPT. | Completed,
9/84 |

13. Summary

The sample frame for selecting roads to be reconstructed under this project was a list of requests for road improvements presented to the DGC by communities located in Western Honduras, the area of geographical focus for this project. Final selection of roads depended on the results of cost/benefit analyses performed. The methodology used for such analyses is a simplified version of a procedure proposed by USAID. Despite the fact that this simplified version seemed appropriate, road selection criteria have been expanded to include criteria related to development programs implemented in the region where roads are to be reconstructed. This change, introduced after project expansion that took place in 7/83, is to guarantee the integrated development dimension of the project given the problems faced by PRODERO and the COPLANE discussed in Section 15.

The selection of contractors is a two-step process. Firms are prequalified on the basis of merits and they are selected on the basis of the lowest bid. The procedure is sound and is used not only for AID financed projects, but also for those financed by other donors. Strict application of the procedure is required. Three of the sixteen contractors participating in this project showed poor performance or were not able to complete the work required. These contractors will not be accepted for future projects.

The distinction between roads and trails made in the Project Paper on the basis of the method to be utilized to construct the routes was abandoned. This was essentially a consequence of the unreliability of hand labor to be provided by communities benefitting from this project. The volume of traffic in areas where roads are being reconstructed was used to determine the standards of the roads rehabilitated.

Sub-projects are grouped according to geographical location into "packages" which include: (a) access roads from an influence town to nearby communities, and (b) inter-connecting roads between these communities. Packages are awarded to single contractors only when the investment cost of the package does not exceed \$500,000. This system is cost-effective in that it allows centralization of both supervision and construction personnel and equipment.

The method currently being used for constructing roads requires contractors to rent to the DGC the needed equipment for earthworks, to supply all necessary materials for surfacing and drainage structures, and to provide required labor. Under this system equipment rental is paid for on an hourly basis and both surfacing materials and drainage structures are paid for on the unit price basis. The DGC assigns field engineers to project sites. These engineers determine route location, design drainage structures and insure that contractor complies with contract obligations. Most of the supervision of DGC field engineers is provided by AID.

The current construction system has both advantages and disadvantages. On the negative side, under this system contractors are paid upon completion of work. This measure causes additional risk and responsibility to the

contractor as uncontrollable factors such as adverse climatic conditions may force him to redo activities already completed. Increments in risk and responsibility have implied increases in the cost per kilometer with respect to costs initially estimated. On the positive side, however, the fact that payment is made upon completion and acceptance of work has motivated contractors to finish the job at a faster rate than anticipated, and as a consequence the time devoted to construction has been reduced. Under this system, work produced is also of better quality. The supervision provided by AID has been instrumental in insuring that a more rapid pace in construction is not to the detriment of the quality of the end product being generated. Despite these accomplishments, closer supervision and additional technical support from the DGC's central office to its field engineers, is needed. This type of supervision and support would help prevent some of the inadequate decisions that have been made by field engineers particularly in relation to drainage structures and the horizontal and vertical alignment of certain roads reconstructed.

Since the main objective of the project is to rehabilitate roads, it has been assumed that construction drawings are not needed. Road rehabilitation implies essentially conforming the road's surface, completing the drainage system and placing sub-base material for the protection of the embankment. Construction drawings are not indispensable for this type of work. However, they are a useful instrument to estimate construction costs with more accuracy, to allow the contractor to conceptualize more clearly what it is expected of him, and to supervise his work. The evaluators have recommended that for these reasons, at least preliminary construction drawings should be prepared for sub-projects. This may include nothing more than typical sections and standard design details for drainage structures. This recommendation coincided with Mission planning since as of 7/84 the use of such drawings was instituted.

Road construction has not generated as much employment as initially anticipated. The reasons explaining why this happened are discussed in Section 20.

The maintenance of roads reconstructed under this project is the responsibility of the General Directorate of Maintenance (DGM). In general, roads reconstructed meet the minimum specifications required by the DGM to include them in its all-weather road maintenance network. Considerations regarding the use of the equipment repaired under this project for the maintenance of the roads rehabilitated are discussed in Section 15. The involvement of benefiting communities in road maintenance activities is discussed in Section 18.

14. Methodology

This was a formative evaluation conducted to assess the adequacy of project implementation arrangements, the degree of community involvement in road maintenance and the extent to which newly connected areas were included in the service delivery programs of the GOH maintenance programs or the DGM.

The evaluation was to concentrate on administrative procedures utilized to implement the project, rather than on project impact. The evaluation was conducted by a team composed of three Honduran professionals: an economist with extensive experience in rural development projects, an engineer with significant background in road construction, and a sociologist with previous background in research and community development. The evaluation methodology was based on: (a) the analysis of secondary sources of information such as the Project Paper, the loan agreement and sub-project progress reports; (b) interviewing personnel from the General Directorate of Roads, the General Directorate of Maintenance, relevant AID personnel and relevant government institutions involved in service delivery, contractors, municipal authorities, community organizations and road users; and (c) field visits. Contractors interviewed were selected on the basis of size and number of contracts and time of involvement in project implementation. Twenty different communities were visited. These were communities where selected contractors had operated or were operating.

15. External Factors

1. In the early 70's, the GOH became interested in developing the Western Region of the country, and with this objective in mind the PRODERO project was designed. The PRODERO project, based on an integrated development approach, was conceived as the means to deliver educational, health, transport, agricultural credit and extension services to this area. Project 522-0164, Rural Trails and Access Roads, was initially seen as AID's contribution to these development efforts. It was anticipated that both PRODERO and CONSUPLANE would be notified of where roads were to be rehabilitated so that they could adequately plan their service delivery programs. The integrated development dimension of Project 522-0164 was nevertheless lost as this project was implemented. Two factors contributed to this loss. On the one hand, GOH development plans changed and PRODERO became second priority. And on the other, CONSUPLANE ended up having a low profile in the promotion of coordinated inter-institutional development efforts and in the allocation of budget resources for the extension of government services.
2. When the agreement for the first phase of the project was signed, the decision was made to contribute with funds for the emergency repair and rehabilitation of approximately 25% of the maintenance equipment of the DGM. The repair of this equipment was to enable the DGM to maintain its road inventory. Equipment to be repaired under the project was supposed to be used only for the maintenance of secondary roads. At that time, a loan from IBRD was expected to be signed soon. Under this loan, \$11.4 million were to be provided to strengthen DGM's maintenance capability. When the evaluation was conducted, AID funds for equipment repair had been totally disbursed, and the anticipated repairs had been successfully completed. However, equipment financed under the IBRD loan was still not

available. As a consequence, the evaluators argued that equipment repaired with AID funds had been used partially for the maintenance of the primary road network. Mission surveys have indicated, however, that this statement needs to be qualified since less than 10% of the equipment repaired with AID funds is being used for that purpose. When the evaluation was conducted, it continued to be predicted that the maintenance needs of secondary roads, including those reconstructed under this project, would be satisfied upon the arrival of the maintenance equipment to be financed by the IBRD.

16. Inputs

The evaluators concluded that the project's implementing agency, the Executing Unit of AID Financed Projects within the Directorate General of Roads (DGC), has the adequate structure and staff to implement project activities as expected. The GOH is complying with the requirement to provide the funds needed to hire both the administrative and technical personnel required to staff this unit. The implementation of the project required this Executing Unit to expand. Despite the fact that engineers hired under this expansion were recent university graduates, they proved to have sufficient training to participate in the project, to learn from experience and to (eventually) perform as required. It is important to retain these personnel. If replacements are required or if future expansion takes place, however, the preference should be to recruit new engineers who already have field experience. For the evaluators, to accomplish this objective the government would have to consider offering contracts for the length of the project rather than for only one year at a time. GOH regulations, however, preclude the implementation of this recommendation since all PSCs are limited to one year. The DGC has argued that as the rhythm of work changes, the work force must change with it. This flexibility is not possible on long contracts.

For project implementation, AID staff consists of one chief and two assistant engineers. AID is involved in sub-project selection, in advising SECOPT on technical decisions, and in providing direction to the supervision and management of the program. AID's field supervision has played an important role in implementing the project and in insuring the reconstruction of a high quality end-product.

In certain cases, certain (technical) changes not contemplated in the sub-project's original budget would have permitted a better route to be constructed. These changes were made through modification of the contract. This is a lengthy process. In the future, sub-project budgets should allow a certain degree of flexibility in the contract so that changes of this sort can be introduced.

Given the size of the construction companies participating in the project, working capital is a function of available bank financing and timely payment for work completed. To date, no major problems have been observed in these payments. This record must be kept since it contributes to contractor performance.

Given the scarcity of foreign exchange in Honduras, contractors face difficulties in obtaining needed parts to keep their equipment functioning. To solve this problem, the evaluators have suggested that AID follow the example of other international donors who pay part of the contracts in dollars. AID regulations, however, prohibit payment of local contractors in dollars unless they have dollar expenditures. Furthermore, since contractors have not requested such payments, the Mission believes that this recommendation cannot be implemented.

17. Outputs

Initially this was designed as a three-year project with the original PACD planned for 3/83. However, this PACD was subsequently extended for one year to 3/84. This extension was justified given the problems confronted at the outset of project implementation and the steady acceleration observed in construction activities, particularly throughout CY 82.

When the evaluation was conducted, during the last quarter of FY 83, over 80% of the project's life had elapsed. By that time, 78% of the kilometers to be reconstructed were either completed or under reconstruction and 17% were either already awarded or ready for bidding.

18. Purpose

The project's purpose is two-fold:

1. the expansion of the network of all-weather trails and roads in selected regions of the country; and
2. an increase in the number of kilometers of all-weather dirt roads maintained by SECOPT's DGM.

As can be deduced from data provided in Section 17 dealing with Project Outputs, the first purpose is being accomplished. The rate at which roads are being rehabilitated is essentially a consequence of the new system adopted for road reconstruction based on the rental of equipment and the payment for drainage structures completed in terms of unit prices.

Although road maintenance is the responsibility of the DGM, initial project design called for communities benefiting from project activities also to be involved in road maintenance. Local maintenance committees were to be created in these communities. They were to be kept active both by the DGC social promoter. It was anticipated that an inspector from DGM would inspect roads, identify deficiencies and advise communities and the promoter of the maintenance work required. The promoter would in turn mobilize needed community labor for tasks to be completed. Project design also called for the participation of PCV in promoting community involvement. SECOPT has not carried out the expected tasks to sustain organizational efforts at the community level that could mobilize community labor for either road maintenance, and PCVs have had little participation in project implementation. The evaluators have suggested that members of benefiting communities could easily participate in preventive maintenance activities such

as clearing side ditches and culverts and removing small slides. Their involvement in such maintenance activities could be obtained if an adequate social promotion program is instituted. The implementation of such program would have to rely on both municipal governments and existing community associations. The evaluation report includes an annex outlining activities that could be carried out to implement the suggested social promotion program.

19. Goal

The goal of the project is to help the Government of Honduras in its efforts to increase the income of, and delivery of social and technical services to, small farm families in rural areas.

Given the problems confronted by PRODERO and the difficulty for CONSUPLANE to play the expected role in coordinating inter-institutional development efforts to provide needed services to the communities benefiting from project activities, project impact can only be assured if the selection criteria for roads to be rehabilitated are modified. These selection criteria must include the existence of development programs in the regions where roads will be reconstructed. This modification was introduced when the project was extended in 7/83.

20. Beneficiaries

A. Farmers. Direct project beneficiaries of the first phase of the project are the inhabitants of the Western Region of Honduras. Since the main economic activity in the area is agriculture with over two-thirds of the population being farmers, it was anticipated that the increased access to motorized transportation made available through the reconstruction of all weather roads would (1) reduce the transportation costs of both agricultural inputs and production, and (2) allow these farmers to have access to markets where better prices could be obtained for their products. These two factors were expected to generate a 15% increase in agricultural production in the area. Net benefits to farmers as a result of induced production increases were anticipated. It was also predicted that once roads were reconstructed, credit agents, extensionists, health promoters and primary school teachers and other public administration personnel would provide better services by making more frequent visits in the project area.

A visit paid to the oldest road reconstructed under this project by the Mission Evaluation Officer in 5/83 indicated that farmers had increased the area cultivated with traditional subsistence crops, particularly corn. Road reconstruction made possible the transportation of agricultural inputs directly to the farmer at affordable prices. The use of fertilizer had become a common practice in the area visited and, as a consequence, corn yields had increased. Farmers in the area indicated that they were producing

enough corn for their own consumption, instead of having to buy it as was the case previous to the roads being rehabilitated. Other farmers in the same area had adopted the cultivation of potatoes as a cash crop. The rehabilitated roads permitted the circulation of small cargo trucks all year round, thus either reducing or eliminating the possibility of losses in production as a consequence of the lack of inadequate storage facilities on the part of farmers.

Outside evaluators contracted to conduct the project's midterm evaluation being summarized here have suggested that for the benefits of induced production increases to remain in the hands of farmers, more coordination with other development efforts are needed. The evaluators have argued that marketing channels still need to be improved.

Baseline data collection to study the impact of the project in the areas where roads will continue to be reconstructed given the authorized project extension was initiated in 7/84.

- B. Employment. Project design was based on the distinction between roads and trails, and it was assumed that 20% of the total cost per kilometer in the case of roads and 60% of that cost in the case of trails would be used to hire unskilled labor. Because the distinction between roads and trails was abandoned during project implementation due to the reasons indicated in Section 13, the project has in fact generated less employment over a sustained period of time than initially anticipated. Although most of the labor force utilized is unskilled, when the evaluation was conducted total labor costs per kilometer reconstructed only ranged from 10% to 15%. The lower proportion of labor utilized is a consequence of the following facts: (1) since contractors rent their equipment to SECOPT, they want to maximize its use to obtain higher profits; (2) construction time is reduced when equipment rather than labor is utilized; (3) contractors have a permanent staff of employees which they move around according to contracts won; (4) as less local labor is hired, the possibility of labor conflicts diminishes; and (5) construction activities may conflict with agricultural pursuits and unskilled labor is not always available when needed.

21. Unplanned Effects

Given the average amount of contracts awarded, this project has tended to attract small construction companies. They have found the construction system instituted suitable and have agreed to be paid on the basis of unit prices. The involvement of these companies in project activities has contributed to their survival in a depressed economy.

22. Lessons Learned

1. Roads are instrumental to development. As a consequence, they should not be considered as an end in themselves. Project design must

incorporate elements insuring the integrated development dimension of projects of this sort. Otherwise, project impact may be affected/delayed unnecessarily.

2. In countries like Honduras, a distinction between trails and roads based on how routes are to be reconstructed may prove to be both unnecessary and hard to make in practice given the uncertain availability of labor in rural areas. The only distinction made should be based on road standards.
3. Under a system of construction where rental of equipment and payment on the basis of unit prices prevail, employment objectives such as those defined in the original design of this project may be hard to achieve.

22. Special Comments/Remarks

As a result of the evaluation, AID and SECOPT engineers and the social promoter are meeting with the Mayor and/or Presidents of Patronatos to inform them of their role in routine maintenance, such as cleaning ditches and catch basins and any maintenance activities that require only the use of hand tools such as machetes, picks and shovels. The communities visited to date have indicated a willingness to cooperate in this type of maintenance.