DS/DIU/DI 50.9 P.P.

PD-AAJ-033

CLASSIFICATION

PROJECT EVALUATION SUMMARY (PES) — PART I

Report Symbol U-447

1. PROJECT TITLE	2. PROJECT NUMBER	3. MISSION/AID/W OFFICE
Hurricane Rural Reconstruction and Recovery II	522-0133.2	USAID 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) 522-82-7

☐ REGULAR EVALUATION ☐ SPECIAL EVALUATION

5. KEY PROJECT IMPLEMENTATION DATES			6. ESTIMATED PROJECT FUNDING	7. PERIOD COVERED BY EVALUATION
A. First PRO-AG or Equivalent FY 77	B. Final Obligation Expected FY 81	C. Final Input Delivery FY 81	A. Total $ 2,450,000 B. U.S. $ 850,000	From (month/yr.) 11/76 To (month/yr.) 9/81 Date of Evaluation Review

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
None - Project completed and no further actions required.	N/A	N/A

9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS

- ☐ Project Paper
- ☐ Financial Plan
- ☐ Logical Framework
- ☐ Project Agreement
- ☐ Implementation Plan e.g., CPI Network
- ☐ PIO/T
- ☐ PIO/C
- ☐ PIO/P
- ☐ Other (Specify) _____
- ☐ Other (Specify) _____

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)

Richard Dudley-ENG Office Dir. & Project Officer
James Banks -Project Support Officer
Carlos Zamamo-GOH Project Manager
John C. Kelley-Mission Evaluation Officer
PES based on information gathered by Estudios & Proyectos

12. Mission/AID/W Office Director Approval

Signature: John R. Clyne

Typed Name: John R. Clyne, Acting M

Date: USAID/Honduras February 12, 1982

AID 1330-15 (3-78)

EVALUATION 030

13. Summary

All work on the project was terminated on September 30, 1981, the Terminal Disbursement Date (TDD) of the Project. The project anticipated the rehabilitation/reconstruction of approximately 400 Kilometers of access roads. These roads were to be constructed to provide year-round access to markets, and included bridges as well as other lesser drainage structures. At the TDD, the GOH had completed, to AID's satisfaction, 63 roads (77 sections) and 407 Kilometers total length. Therefore, it can be said the physical requirements of the project were met.

The construction activities under the project were undertaken by a more or less trial and error system. The Project Agreement specified that design and reconstruction was to be done by Directorate General of Highways (DGH) utilizing labor intensive methods where possible. Private consultants were to supervise all construction and certify payments. A local firm was contracted to do this work, which later proved to be technically and administratively unable to perform adequately. The supervision was assumed by the DGH after two and a half years of this contract. AID financed the procurement of heavy equipment to permit the DGH to do the work by force account, as planned in the Project Paper. While waiting for the equipment to arrive, the DGH, initiated the construction effort by renting equipment, with operators, from local contractors. This system was used until the arrival of the heavy equipment, a period of about five months. After arrival of the equipment, the DGH began doing the work by force account. By early 1980, and after some 15 months of force account operation, it became apparent that because of procurement and cash flow problems, as well as the late start, the rate of progress was such that the anticipated work would not be finished within a reasonable time frame and it was decided to supplement the DGH force account work by using contractor rented equipment for the roads in the La Ceiba and Trujillo areas. Thus, the project was finally completed some 10 months beyond the original TDD.

14. Evaluation Methodology

The loan agreement required annual evaluations. However, the only evaluation performed during the life of the project was undertaken by a Honduran firm in April 1981 and was finished shortly before the Project TDD in September 1981. The evaluation was done jointly with an evaluation of the Rural Trails Project (AID Grant 522-0137). The scope of work required the evaluator to provide information on the procedures used as well as the estimated impact the projects had on the economic and social structure of the influenced areas. The latter task was somewhat difficult as no base line data had been collected prior to the improvement of the roads, and in attempting to determine the status after the fact,

obviously, a degree of accuracy was sacrificed. Also, as each section of road surveyed had been completed for different periods of time at the time of the evaluation, it was not possible to obtain a comparable study on the roads analyzed.

15. External Factors

Not pertinent at this time.

16. Inputs

The final evaluation, prepared by Estudios y Proyectos Tecnicos, S.A. (EPTSA), noted the following items in regard to project inputs:

1) The use of hand labor resulted in deficiently constructed roads.
2) The use of contractors for road construction was more expensive, but eliminated many of the problems involved in procurement and payment encountered in the use of force account work.

In regard to the second item above, the Mission records support EPTSA's observation. For example, spare parts for the heavy equipment arrived approximately a year after the receipt of the equipment due to delays in the GOH procurement process. Locally procured project materials (cement, culvert pipe, etc.) were requested in November 1978, but were not received until April 1980, again due to GOH procurement procedures.

Long delays in making payments for labor and diesel fuel had a considerable negative effect in the progress of the project. By performing the work by contract, these delays were either eliminated or mitigated to such an extent that the tempo of construction increased to where the project could be completed in a reasonable period.

The use of contractors' equipment, however, did not eliminate all the problems. Under this mode of operation, the contractor had no incentive to perform in a way that was effective, nor in accordance with good construction procedures. The work was directly supervised by an engineer contracted by the DGH. The results varied from contract to contract, depending on the quality of the DGH engineer and the contractor, but in several cases it was clear that the contractor's only interest was in being paid for his equipment and the labor provided by him under his contract.

Other than the problems with procurement, the inputs provided by the GOH were adequate. The DGC established an AID project implementation unit, whose primary responsibility for much of the project life was the implementation of this project. The engineers provided by the unit to supervise the construction were mostly inexperienced, but there are few engineers in Honduras experienced in this type of work, and most of these enjoy a more permanent employment with salaries in excess of those permitted by the DGH.

1/. Outputs

The physical infrastructure was completed as anticipated. Four hundred and seven kilometers of road were rehabilitated as compared to the "aproximately 400 Kilometers" as stated in the project paper. The evaluation undertaken by EPTSA, reported the following information on the social-economic benefits in a comparison of the "before and after" status:

A) Economic Indicators

	Averages
1) Income from Agriculture	+48.35%
2) Daily Salaries (not farm related)	+36.92%
3) Income from livestock	+18.30%
4) Tax Collection	+56.05%
5) Migration to areas (families) (based on the construction of new houses)	+ 7.2%
6) IRR (based on road user savings only)	
a) based on 15 yr life (all with positive IRRs)	32.6%
b) based on 10 year life (use in PP) (96% of road with positive IRRs)	28.65%
c) based on 7 year life (75% of road with positive IRRs)	12.83%
d) Based on 5 year life, 47% of the 200 Kms surveyed had negative IRRs.	

The statistical information noted above is based on a sample covering about 50% of the total length of all the roads in the project, and includes areas where the road has been rehabilitated for periods ranging from two years to one month. These roads serve about 40 communities. Roads were selected to represent a cross section of all areas covered by the project, however, the range in time since completion would make this evaluation useful only as a trend, rather then as a true evaluation of impact in the area.

B) Social Benefits

The evaluator's assessment of social benefits indicated the following changes in status since completion of the roads:

a) 78.9% believed that there are more articles available for purchase.
b) 55% believed that medical service had improved.
c) 75% believed that the mortality rate had decreased.
d) 75% had improved their homes.
e) 4 communities (of 90 surveyed) reported that telegraph service had been extended (increase of 22%).
f) 9 additional communities (of 90 surveyed) reported that newspapers now are available (increase of 228%).

g) The use of motor vehicles as the principal method of transportation increased by almost 500%, and bicycles by 166%. Other methods (horseback, burro, foot, canoe, etc.) all decreased.
h) 99% of those interviewed believe the roads to be beneficial.

18. Project Purpose

The Project Paper states the purpose as "to reduce time spent and expense incurred (by farmers) in transporting farm produce to market." Although no measurements were made to confirm that this purpose has been accomplished, indicators such as change in transportation mode and increased income would lead one to believe that the project purpose is being met.

19. Goal

The Project Paper states the sub goal as to "Improve the quality of life for rural families through improved access to farm markets and public services." The objectively verifiable indicators (OVI) list:

a) "Small farm income increases in affected area". The data elsewhere in this report note that the average income from agriculture has increased 48.35% and from livestock 18.30%.
b) "Increased economic activity in affected areas due to expansion of acreage cultivated and growth of employment activities." The evaluators did not attempt to measure increased acreage under cultivation because of the doubtful validity of any data acquired given the timing of crops, and the varying periods since completion of the roads. However, non farm income (+36.92%) and taxes collected (+56.05%) are all strong indicators of economic growth in the project area.
c) "Increased use of health facilities." There was very little direct information that the existing health facilities were utilized more than before the road improvements. However, it was noted that most inhabitants believed that medical service had improved and that the mortality rate had decreased. Also, in a poll to determine the most important uses of the road, rapid transportation of people needing medical attention was third (16%), behind only transportation of crops to market (22%), and access to the urban areas (17%).

20. Beneficiaries

The beneficiaries of the Project are 14,000 small farm families living in the areas of influence of the roads. Criteria used for selection of roads were:

a) Located in hurricane disaster area;
b) Primary beneficiaries to be small farmers;
c) Areas of high agriculture production or potential;
d) Good ratio of benefit to costs over 10 year life.

21. Unplanned Effects

The evaluation of the project did not indicate any notable effects, positive or negative, that were not previously anticipated. This is not to say that as the communities become more adjusted to the improved access, events may occur that would have an unplanned impact on the project area.

22. Lessons Learned

A significant number of problems occured during the implementation of the project, ranging from critical to merely troublesome. Most of them are peculiar to the project, the area or the country. A list of the more notable ones follows:

A) Labor intensive road construction.

Construction of roads through labor intensive methods requires a combination of ingredients, all of which must be available to have a successful project. The following were found to be applicable to this project: (1) the work force must be in the area, and available and willing to work; (2) the government agency supervising the work must be dedicated to labor intensive construction, and be able to provide trained promotors as well as supervisors; (3) all agencies involved must be willing to accept slow progress, high administrative costs and a relatively poor finished product; (4) supervision must be constant; (5) construction contractors are reluctant to use labor intensive methods; (6) patience is an absolute necessity. As progress slows down and deadlines pass, the temptation is strong to move in heavy equipment to assist. Once equipment is on the job, the laborers become more reluctant to work.

The above only applies to roads constructed entirely by labor intensive methods. A mixture of labor intensive and equipment may be quite acceptable long as hand labor and equipment are not involved in the same type of work.

B) Methods of Construction

If force account construction is anticipated, it is imperative that restraints be identified and dealt with prior to deciding on this method. Items that should be reviewed are:

1) Does the implementing agency have control of funds used for construction? If so, what is the limit of obligations it may incur without requiring approval from another organization.

2) What is the "track record" of the agency responsible for procurement?

3) What agencies will become involved in international bidding, and what is the competency of the agencies?

4) Should the implementing agency be responsible for maintenance and repair of equipment, or would it be more appropriate to have it done through commercial sources.

One of the methods of construction on this project involved the use of operated equipment rented from contractors. In effect, the contractor had a cost plus fee contract assuming he had a profit factor calculated into the cost of the rental rates. Although this eliminated or reduced the risk for the contractor he had no incentive to work efficiently or to provide a good finished product. As the risk was reduced, the actual cost was less than if the roads were bid on unit prices. However, considering the end result and the amount of supervision monitoring required both by the implementing agency and AID, it would be well to consider alternate methods of construction, or a combined system where the contractor has some control over the work and would only be paid for acceptable work.

C) Hand Labor Maintenance

The project also called for the roads to be maintained by the residents in the area. This did not prove to be practical for various reasons:

1) there was a lack of commitment by, and organization in, the communities served by the roads;
2) the Maintenance Department was not willing to dedicate the time and manpower to this end, as it is much more rapid and easier to maintain roads by use of equipment.

If hand labor from the areas or the roads is to be used for maintenance, it appears that a binding agreement must be negotiated and agreed upon prior to the commencement of construction, and the agency responsible for maintenance must have a section dedicated to this work, and funds in its budget to cover it. A system allocating a specific number of person-months of labor each year for each community, with the community signing a formal agreement could be a step in the right direction. The implementation, of course, would have to be the responsibility of the maintenance agency, which would schedule and oversee this work.

23. Special Comments or Remarks

This project was a success from the point of view of meeting both the physical requirements and the impact on the communities. Although the TDD had to be extended for ten months, the fact that the project was completed in this period was due to the close cooperation between the Directorate of Caminos and the USAID.