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 70-PAV-496
 151-49709

A. I. D. EVALUATION SUMMARY PART I

A. USAID/SANAA
 YEMEN ARAB REPUBLIC
 ES #87-01

B. WAS EVALUATION SCHEDULED IN CURRENT FY ANNUAL EVALUATION PLAN? Yes

C. EVALUATION TIMING
Interim

D. ACTIVITY OR ACTIVITIES EVALUATED

Project #	Project/Program Title	First PROAG (FY)	PACD	Planned LOP	Amount Obligated to date
279-0077	SELF-HELP ASSISTANCE FOR RECONSTRUCTION OF EARTHQUAKE DAMAGE (SHARED)	1984	08/87	70,765,500*	70,765,500*

*Yemeni Rials from P.L. 480 Title I sales.

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

Action (s) Required	Name of Officer	Date Action to be Completed
1. Publicize project as success with emphasis on: -organization and coordination of several donors, -excellent development of training materials, -construction of housing units through: -Front Lines, -Case Study at International Year of of Shelter, 1987 -Attendance at Earthquake Disaster Construction-Mitigation Conference, Ankara, Turkey, Aug-Sep, 1986.	General Development Officer w. RHUDO/Tunis	12/87
2. -Participate in donor evaluations.	Project Officer	12/86
3. -USAID continue to concentrate on resolving delays in release of proceeds of the project.	Program Officer	08/86

F. DATE OF MISSION OR AID/W OFFICE REVIEW OF EVALUATION 02/28/87

G. APPROVALS OF EVALUATION SUMMARY AND ACTION DECISIONS: Date:

General Development Officer, Howard Thomas	<i>Howard Thomas</i>	4/11/87
Program Officer, Geraldine Donnelly	<i>Geraldine Donnelly</i>	4/18/87
Evaluation Officer, Mansour Shamiri	<i>Mansour Shamiri</i>	4/18/87
Director, USAID/Yemen, Kenneth H. Sherper	<i>Kenneth H. Sherper</i>	4/20/87

Representative of Borrower/Grantee (See attached signed report).

H. EVALUATION ABSTRACT

P.L. 480 Title I proceeds (70,765,500 Yemeni Rials) are used to support the Supreme Council for Reconstruction of Earthquake Affected Areas (EOR) in construction of 1,000 earthquake-resistant homes in the Dhamar Province of the Yemen Arab Republic to replace homes destroyed in the December 1982 earthquake. The SHARED project (duration: June 19, 1984 - August 31, 1987 since the evaluation, extension of the project to March 1988 is being considered) an agreement with the Kingdom of the Netherlands in conjunction with the EOR, is managed by the Dutch firm of DHV Engineering Consultants (contract funded by the Netherlands Government). Additional contributors are the U.S. Peace Corps (3 Volunteers) and the European Economic Commission (approximately \$2.55 million for commodities).

Project objectives are (1) to provide shelter for the people affected by the earthquake and (2) to transfer the technology of earthquake-resistant building techniques. The project provides all building materials not available in the area payment for masons, and training and supervision in construction. The self-help contribution from beneficiaries is in the form of local building materials, unskilled labor and home sites.

The project is managed in Dhamar and five Building Advice Centers (BAC), built using earthquake-resistant construction techniques, serve as focal points for disseminating construction and training activities in the two affected areas. Each BAC has been staffed by one PCV, one Yemeni Engineer and four construction supervisors.

Major Findings and Conclusions: By April 1986, despite delays in supply of non-local building materials and P.L. 480 proceeds, 115 houses had been completed and 140 houses were in progress. Success of the technique and training, as indicated by adoption for non-home construction, is attributable to: (1) preservation of traditional Yemeni architectural features, (2) construction of new homes next to the damaged house (i.e., villagers not relocated; scarce agricultural land not used), (3) occupation of homes upon completion, (4) effectiveness of training materials, (5) provision of jobs, and (6) suitability of technique for public buildings.

I. EVALUATION COSTS

1. Evaluation Team

Name	Affiliation	Contract Number OR TDY person Days	Contract Cost OR TDY cost (US\$)	Source of Funds
Dean Swerdlin	Assistant Housing and Urban Dev. Officer, RHUDO, Tunis			
Ir. Cor Dijkgraaf	Director of the Institute for Housing Studies, Rotterdam, Netherlands			

no cost 9 days

- 2. Mission/Office Professional Staff Person Days (estimate) 3 days
- 3. Borrower/Grantee Professional Staff Person-Days (estimate) 9 days

J. SUMMARY OF EVALUATION FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

1. USAID YEMEN
2. SELF-HELP ASSISTANCE FOR RECONSTRUCTION OF EARTHQUAKE DAMAGE (SHARED)
Project No. 279-0077
3. PURPOSE: To provide shelter for people affected by the 1982 earthquake and to transfer the technology of earthquake-resistant building techniques.
4. EVALUATION PURPOSE/METHODOLOGY. To observe progress by an outside evaluator, identify project constraints and assess the overall success of the project. Three separate evaluations have been conducted by an outside Dutch consultant representing the Netherlands Government and the EEC. USAID requested representation to review progress at the end of phase 3 and the beginning of phase 4. The evaluation, performed during the week of April 11-19, 1986, was conducted by Dean Swerdlin, Assistant Housing and Urban Development Officer (RHUDO/Tunis) and Cor Dijkgraaf, Director of the Institute for Housing Studies, Rotterdam, Netherlands. The mission met with project staff in Sanaa, Dhamar, and each of the five Building Advice Centers as well as at USAID and the Netherlands Embassy. A two-day visit was made to the two affected areas. USAID and DHV quarterly reports were reviewed.
5. FINDINGS. Summary: By April 1986, despite delays in supply of non-local building materials and P.L. 480 proceeds, 115 houses had been completed and 140 houses were in progress, with 860 yet to be started.

P.L. 480 Title I proceeds (70,765,000 in Yemeni Rials) are being used to support the Supreme Council for Reconstruction of Earthquake Affected Areas (EOR) in construction of 1,000 earthquake-resistant homes in the Dhamar Province of the Yemen Arab Republic to replace homes destroyed in the December 1982 earthquake. The SHARED project (planned for: June 19, 1984 - August 31, 1987, with a possible extension of the project to March 1988, under an agreement with the Kingdom of the Netherlands in conjunction with the EOR, is managed by the Dutch firm of DHV Engineering Consultants (contract funded by the Netherlands Government). Additional contributors are the U.S. Peace Corps (3 Volunteers) and the European Economic Commission (approximately \$2.55 million for commodities).

SHARED is one of three components of the EOR reconstruction program. The project provides all building materials not available in the area, payment for masons, and training and supervision in construction. The self-help contribution from beneficiaries is in the form of local building materials, unskilled labor and home sites.

Date this summary prepared: December 1986

The project is managed in Dhamar. Five Building Advice Centers (BACs), built using earthquake-resistant construction techniques, serve as focal points for disseminating construction and training activities in the two affected areas. Each BAC is staffed by one PCV, one Yemeni Engineer and four construction supervisors.

Progress findings are as follows:

- Delivery of Building Materials. After a one-month delay in deliveries of cement, wood joists and plywood by the Yemen Foreign Trade Corporation, no materials remain. The Central Planning Organization is writing to the Commission to resolve the bottleneck of obtaining import licenses which provide some tax exemptions. An interim solution is to purchase materials locally at greater cost. Meanwhile, beneficiaries are buying cement under the assumption of repayment. (Note: This issue was resolved temporarily and arose again in late 1986. The EOR and DHV have reached some agreements to accommodate necessary commodity procurement).
- Financing. Transfer of P.L. 480 Title I proceeds has been consistently behind schedule, causing work stoppages between expenditure of one funding tranche and availability of another. To meet subcontractor and material costs, both DHV and EOR have advanced funds with the Government's approval, in expectation of replenishment from P.L. 480. DHV/EEC are not prepared to continue such financing. (As a result of evaluation findings, the CPO and Ministry of Finance approved release of a total of 61 million YR to date. The financing issue thus appears resolved for the moment, although additional funds will be required in mid-1987).
- Training. PCVs have generated an excellent spirit of cooperation with the local authorities and beneficiaries, and their enthusiasm and belief in the project are evident. However, with trained Yemeni engineers and counterparts at all BACs, PCVs feel their role has shifted from technician to administrator and two of the five have left.
- Training materials (video tapes, poster board, manuals) are of high quality and are very successful in transferring technology. Local masons are already using techniques in buildings such as schools and mosques.
- Self Help Approach. Yemenis realize that the self-help approach has been the most successful program of all the reconstruction programs currently being implemented in the region.
- Techniques. Two techniques are used. The U-Block masonry solution and the Nagron prefabricated unit. The quality of materials used and workmanship is good. However, the assumptions of lower cost and less supervision for the Nagron unit have proven incorrect and, once materials for these are used, the model will not be encouraged further.

- Beneficiary Selection. 750 beneficiary contracts were signed as of the evaluation date. Some poorer residents who cannot easily provide local building materials or unskilled labor are not eligible. DHV is working with EOR to assess ways of including some poorer residents in the program for starter-core houses which can be expanded over time as funds become available. Some poorer residents now benefit by receiving payment for unskilled labor.

CONCLUSIONS: Summary: Success of the techniques and training, as indicated by adoption for non-home construction, is attributable to: (1) preservation of traditional Yemeni architectural features, (2) construction of new homes next to the damaged house (i.e., villagers not relocated, scarce agricultural land not used), (3) occupation of homes upon completion, (4) effectiveness of training materials, (5) provision of jobs, and (6) suitability of technique for public as well as private buildings.

- The project is a success from a technical and donor coordination standpoint in spite of funding and material supply delays caused by lack of the necessary coordinated government response to needs.

- The U-block construction technique (900 units) is technically sound, appropriate and in conformance with traditional preferences. The Nagron semi-prefabricated house, however, requires imported building material and more supervision.

- Training materials are of high quality and are effective in transferring technology.

- Peace Corps Volunteers have generated the cooperation of local authorities and beneficiaries needed for project success.

LESSONS LEARNED.

1. Donor and U.S. Peace Corps coordination is effective when roles are defined and the host country has a specific need and desire for an intervention.

2. Activities which rely upon needs of the rural poor should avoid introduction of technologies which require importation of materials.

3. Initiation of a P.L. 480 Title I program in a country requires a serious, comprehensive educational effort to make USAID and the host government understand the administrative requirements of providing P.L. 480, Title I generations for specific activities.

K. ATTACHMENTS

"Evaluation of the End of Phase 3 of the Dhamar Aided Self-Help Project, April 11-19, 1986", April/May 1986, prepared by Dean Swerdlin, with attachment "Agreed Minutes of Meeting Between the Executive Office and the Evaluation Mission of the Dhamar Aided Self-Help Reconstruction Project."

L. COMMENTS BY MISSION, AID/W OFFICE AND BORROWER/GRANTEE

The Evaluation Report was received at USAID/Yemen in November 1986. Since the evaluation, the Government has released P.L. 480 proceeds in repayment for 2 of 3 EOR advances; and advances provided by DHV and EOR have been cleared. EOR and USAID requested that the Government allocate additional funds before January 1987. Funds are now being provided. The People's Assembly of the Yemen Arab Republic is reviewing all proposed uses of P.L. 480, Title I generations, including planned funding for the balance of this project, and a formally approved Government list of P.L. 480, Title I-funded projects is expected in a few weeks. Cooperation between DHV, the Netherlands Embassy, EOR, USAID and the Government's Central Planning Organization (CPO) has improved greatly. Delivery of materials remains a problem and, as an interim solution, materials, as available, are being purchased on the local market. The CPO and the Yemen Foreign Trade Corporation are seeking a solution to the materials problem which is caused by a serious shortage of foreign exchange within Yemen.

Despite the short time available to Mr. Swerdlin, the evaluation reflects a full understanding of the objectives, management and problems of the project. Problems identified have been known to USAID and the donors through weekly monitoring by USAID staff and participation by DHV and the Netherlands Embassy representative in USAID's quarterly reviews. To meet evaluation needs, USAID will participate in future Netherlands/EEC evaluations. USAID staff plan to participate in the Spring 1987 evaluation.

Donor coordination has been exemplary in this effort and roles well defined. Peace Corps Volunteers with specific skills (i.e., engineering and architecture) have been instrumental in transferring the technology introduced by the Netherlands contractor through local centers. PCV participation, however is phasing out and none will participate beyond December, 1986. Both through self-help contributions and an acceptable technology, beneficiary response is excellent.

Both members of the evaluation team have brought up the concern of institutionalization of the self-help operation with Government assistance. Mr. Swerdlin has introduced the question of cost recovery. Neither concern was part of the agreement between USAID and the donors in USAID's approval of use of P.L. 480 proceeds to meet the desire of the Government to assist earthquake victims in construction of new housing. Self-help is a tradition in Yemeni society, and is perhaps better exemplified by the Confederation of Local Councils for Cooperation and Development than by EOR. Issues of cost recovery, in the Mission's view, are more appropriate to more typical housing programs than to emergency housing programs in the wake of a major disaster.

A proposal from DHV for expansion of the activity, particularly for construction of social structures such as clinics and schools, is under consideration by EOR. However, the future of EOR is uncertain and there are a number of other YARG organizations more suitable to longer-term development efforts in Yemen. USAID does not plan to provide P.L. 480, Title I resources to EOR beyond completion of this SHARED program which, it now appears, will be completed in March, 1988.