A.I.D. EVALUATION SUMMARY PART I

PD-ABB-540

(BEFORE FILLING OUT THIS FORM, READ THE ATTACHED INSTRUCTIONS)

A. REPORTING A.I.D. UNIT: USAID/Guatemala (Mission or AID/W Office)

(ES# 90-01)

B. WAS EVALUATION SCHEDULED IN CURRENT FY ANNUAL EVALUATION PLAN? yes ☒ slipped ☐ ad hoc ☐

Eval. Plan Submission Date: FY 89 Q 1st.

C. EVALUATION TIMING: Interim ☒ final ☐ ex post ☐ other ☐

D. ACTIVITY OR ACTIVITIES EVALUATED (List the following information for project(s) or program(s) evaluated; if not applicable, list title and date of the evaluation report)

Project #	Project/Program Title (or title & date of evaluation report)	First PROAG or equivalent (FY)	Most recent PACD (mo/yr)	Planned LOP Cost ('000)	Amount Obligated to Date ('000)
520-0251	Community-Based Health and Nutrition Systems	09/80	09/90	$10,874	$10,874

*12/89 at time of evaluation

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

Action(s) Required	Name of officer responsible for Action	Date Action to be Completed
- PACD extended to September 1990	A.Szarata,PDSO/ENG	Feb.,1989
- Improve design standards for water supply	Carlos Calderón, Implem. Unit Chief A.Szarata,PDSO/ENG	Sept. 30, 1989
- Review designs to incorporate engineering recommendations	Carlos Calderón, Implem. Unit Chief and Proj. Design Staff	Sept. 30, 1989
- Redefine project targets	A.Szarata,PDSO/ENG Carlos Calderón, Implem. Unit Chief	Sept., 1989
- Reactivate Health Education component	A.Szarata,PDSO/ENG B.López, OHRD	Oct. 3, 1989
- Hold training seminar for water committeess	Carlos Calderón, Implem. Unit Chief and Operation and Maintenance Engineer.	Dec. 30, 1989

(Attach extra sheet if necessary)

F. DATE OF MISSION OR AID/W OFFICE REVIEW OF EVALUATION: mo 9 day 14 yr 89

G. APPROVALS OF EVALUATION SUMMARY AND ACTION DECISIONS:

	Project/Program Officer	Representative of Borrower/Grantee	Evaluation Officer	Mission or AID/W Office Director
Signature				
Typed Name	A.Szarata	G.Garcia Ovalle	T.Kellerman	A.Cauterucci
Date	3/8/90	3/7/90	3/8/90	

H. EVALUATION ABSTRACT (do not exceed the space provided)

The initial Project Agreement was aimed at implementing an integrated environmental sanitation and primary health care effort in small communities in three Departments of the Western Highlands of Guatemala. Amendment No. 1 to the Agreement concentrated the goals of the project on the provision of potable water, excreta disposal facilities and health education to rural communities, but expanded the area to include six Departments of the Western Highlands.

This project is being implemented by the División de Saneamiento Ambiental (DSM), the environmental sanitation division of the MOH. This mid-term evaluation was conducted by the WASH Project with a two-person team from October 23, 1988 to November 10, 1988. They conducted a review of project documents, carried out field visits of nine water systems for review of construction quality, carried out a survey of 30 communities in five Departments and conducted interviews of MOH and USAID personnel. The purpose was to determine the development status of the project and to recommend appropriate actions in the future.

The major findings and conclusions were as follows:

- System performance is adequate and water is now delivered to more than 12,000 households. However, there are some deficiencies in design and supervision that must be corrected and more emphasis should be given to training the community in system operation and maintenance.

- A follow-on project is recommended to build on the progress already made. USAID support is required because the Guatemalan Government cannot reasonably provide the necessary funding and support on its own, and without such financial support, past accomplishments of the water and sanitation program will not be continued.

- The health education component of the project should be strengthened with responsibility for supervision placed within the USAID Office of Human Resources Development, with a community-focused participatory approach for creating strategies to meet 12 hygiene related goals.

- The evaluation team supported an extension of the PACD but not the extension of the targets beyond the existing levels, recommending instead concentration on improving the professionalism of the implementing unit, improving the quality of designs and construction activities and not executing more water supply projects beyond the capacity to maintain adequate quality control and supervision.

I. EVALUATION COSTS

1. Evaluation Team

Name	Affiliation	Contract Number OR TDY Person Days	Contract Cost OR TDY Cost (US$)	Source of Funds
Frederick Mattson	WASH	DPF-5942-C-00-4085-00	$44,000	AID GRANT
Janice Burns	WASH	(PIO/T 520-0251-3-50226)		520-0251

2. Mission/Office Professional Staff Person-Days (estimate) 10

3. Borrower/Grantee Professional Staff Person-Days (estimate) 6

A.I.D. EVALUATION SUMMARY PART II

J. SUMMARY OF EVALUATION FINDINGS, CONCLUSIONS AND RECOMMENDATIONS (Try not to exceed the 3 pages provided)
Address the following items:

- Purpose of activity(ies) evaluated
- Purpose of evaluation and Methodology used
- Findings and conclusions (relate to questions)
- Principal recommendations
- Lessons learned

Mission or Office: USAID/Guatemala

Date this summary prepared: January 10, 1990

Title and Date of Full Evaluation Report: Evaluation of the Environmental Component of the Community-Based Integrated Health and Nutrition Project in Guatemala, WASH Field Report No. 251, February, 1989.

Purpose of activites Evaluated.

The project agreement was signed Sept. 19, 1980 and an Agreement Amendment was signed March 25, 1985, establishing as purpose of the project, to implement an integrated environmental sanitation and primary health care program in rural Guatemala.

The goal of the project is to improve the health status of the rural poor in six Western Highland Departments of Guatemala, to be achieved through the provision of potable water, excreta facilities and health education to rural communities in the six departments.

Purpose of Evaluation and Methodology Used.

The evaluation was requested through PIO/T 520-0251-3-50226 which established in the scope of work the investigation of a full range of activities -technical, institutional and financialrelating to the development of the project. The three ofjectives requested were to evaluate and compare achievements with the project's purpose and targets for the planned activities, to determine the extent of possible activity targets increase, and the value and feasibility of reintroducing a health education component into the project. These objectives were to be accomplished through the 12 main tasks included in the scope of work.

The evaluation team consisted of a health education specialist and an engineer. Each conducted an investigation in the fields of their own discipline. The in-country activities of the evaluation were performed from October 23 to November 10, 1988. The evaluation was conducted by means of interviews with USAID , DSM and Health Education personnel, the review of documents and drawings, the inspections of water and sanitation works in nine systems, interviews with household users and water committees, officials in the field, simple hydraulic testing of the water delivery systems and a community evaluation of 210 households in 30 communities from five Departments using 15 interviewers and 4 supervisors provided by the implementing unit and trained by the evaluator.

Findings and Conclusions.

In relation to the first objective, "to evaluate and compare the implementation and achievements of the Project", the evaluation found the following:

The new targets for planned activities in the program were to build 23,500 latrines, install 310 water supply systems, and promote health education.

At the time of the evaluation, the team found that the community-based project continued to be primarily an engineering activity engaged in the design and construction of water supply systems and latrines for small rural communities in the six departments. Community size typically ranges from 300 people to more than a thousand. The water supply systems are spring-fed and gravity-delivered and convey water through PVC pipes and branched networks to population centers that are dispersed rather than concentrated. The great majority of systems provide house connections by means of a single standpipe tap near the house. A few systems provide only neighborhood risers with taps. Simple pit latrines are installed at every house that receives a tap and sometimes in communities that have water systems sponsored by other projects. By the end of October 1988 the program had built more than 16,000 latrines and some 168 water supply systems.

From the community evaluation, the team found that the water supplies were perceived as very beneficial, respondents perceive convenience as a real benefit for the mother (81%) and father (24%), and that children's health and hygiene were a benefit of water (84%). The 93% of families pay the water bill, and 75% think the price is right.

The 83% of latrines are in use and in good condition. 97% of respondents cannot think of anything they do not like about their latrine. Benefits of the latrines are perceived to be positive in 96% of the cases where cleanliness and health were mentioned most frequently.

In August 1987, USAID approved the allocation of $33,861.11 for a plan prepared by the Environmental Sanitation Division in conjunction with the Human Resources and Health Education Unit. Activities included research, training, materials development, and supervision.

The Knowledge, Attitude and Practices (KAP) survey was not performed. Several workshops were held in late 1987. The present approach is "top down" while the need is for one that is "bottom up" through field workers and community participation for health education.

In 1988 a one-page calendar was produced, focusing on sanitation and it showed a woman sweeping outside a latrine. The colors are dull, and it is doubtful that the calendar has attracted much discussion or attention. A plan was not developed for the distribution or utilization of the calendar.

The general performance of systems constructed as part of the water supply and sanitation component was found to be good when observed in the field. For the most part, the water systems provided adequate amounts of water at the tap for users who were satisfied with the service they receive and who have wholeheartedly incorporated the convenience of piped water systems into their daily lives. Simple pit latrines were observed at every residence with a water tap, and the great majority appeared to receive at least some use. USAID and DSM have by now made a good start at reaching out and providing working, useful water supply and sanitation systems for small communities in the Guatemalan altiplano.

Some idea of the reliability of water delivery was obtained by discussing water service with users during house visits and by holding discussions with members of the water committees. In all cases, users agreed that service interruption was infrequent and that failures such as ruptured pipes were soon repaired.

The current División de Saneamiento Ambiental (DSM) practice for the selection of water sources is to accept only spring and surface seepage sources that are at high enough elevations to allow gravity flow service to all users and that can be shown through laboratory testing to be bacteriologically safe for human consumption. These criteria are reasonable since in the Guatemalan altiplano there are many such sources and they provide for the simplest, low-technol- ogy, low-cost systems. For the duration of the present USAID/DSM program, the present source selection policy is thought to be adequate. Backbone facilities in communities, however, should be sized based on the project- ed population of the community and not be down-sized to match the capacity of the source. The design and con- struction process outlined above has produced the adequately functioning systems previously described.

The quality of the construction observed was generally good. The concrete work of tanks and valve vaults was always satisfactory and frequently impressive. Buried pipelines, of course, could not be seen, and it was, therefore, not possible to verify conformity of the work with DSM standards or with good practice. Valve installations observed were satisfactory as were taps and risers.

The DSM systems are designed according to standards developed by Unidad Ejecutora de Proyectos de Acueductos Rurales (UNEPAR) and most recently published in 1980 under the title Normas de diseño para acueductos rurales. These standards are concise and well written and appear to be accepted by all organizations carrying out water supply projects in Guatemala.

In each of the eight functioning systems visited, the water was observed, tasted, and smelled to detect problems with color, taste, and smell. No objectionable water samples were discovered, and no users or water committee members indicated any such problems when questioned.

After the systems are completed, the water committees assume responsibility for operation and maintenance. Community members learn some of the skills of system maintenance by observing the masons install pipes, valves, and fittings during construction and some training seminars have also been held.

Every house that received a tap also installed a latrine. The latrines themselves are simple pit latrines without any venting of the pit. The resident digs the pit, installs the fixtures, and completes the job with a rudimentary enclosure and roof. In nearly all cases the latrines were considered to be adequately constructed. In a few cases, the enclosures were found to be poorly constructed and poorly maintained.

In relation to the second objective, "determine the extent to which the project targets for planned activities can be increased," the evaluation found the following:

Given the dispersed nature of the populations served, one system may serve several hamlets or small communities. Often communities are so small that it makes much more sense, depending on local geography, to bring several of them together in a single system. Much less frequently it may also make sense to construct several systems for one community (for example, where a single community is partitioned by some physical barrier such as a ravine or ridge). For this reason, the total number of systems built is not the same as the total number of communities benefited. As of the time of the evaluation, 168 systems had been constructed. These same systems delivered water to approximately 215 distinct communities. It can be expected, therefore, by extrapolation, that the existing program goal to complete 310 systems, if achieved, will result in benefiting approximately 400 communities.

In relation to the third objective, "reintroducing a health education component," the evaluation found the following:

The program construction implementers are responsible for the success of the health education effort. They are experienced in working with WS&S and other development committees. Teachers state they already teach hygiene. These efforts should be supported with materials and supervision.

The August 1987 plan for health education activities in water and sanitation and health needs to be further reviewed, updated, and adapted to the present situation.

Based on the evaluation survey results, the adoption of 12 goals is recommended to bring about changes in water and sanitation behaviors most likely to affect health. The goals were fully reviewed and discussed with the Health Education Unit personnel and should form a basis for the focus of future messages in health education.

Principal Recommendations.

Several aspects of the water supply designs, can and should be strengthened. The link between site conditions and design is too weak. Topographic information provided to the designers is insufficient, and no project should be designed until the designer goes to the field and thoroughly reviews site conditions.

The UNEPAR design standards are appropriate for the USAID-sponsored projects, but in certain areas, they should be augmented by additional guidelines that will help improve performance and insure that the new systems provide a sound basis for permanent water supply in the communities.

These Standards call for sizing pipelines downstream of storage tanks for the peak hourly flow rate. Whereas this is a correct method for trunk line pipelines, the 1.8 peaking factor is not adequate for small groupings of houses such as those found on the branch lines. DSM should be encouraged to adopt a method that works for them and which results in minimum pressure drops.

The WASH team supports an extension of the PACD to the end of 1990 and thinks it is reasonable to expect DSM to meet the existing targets of 310 water supply systems and 23,500 latrines by that time.

The WASH team does not, however, favor extending the targets beyond the present fund levels. This position stems from two fundamental considerations. First, it is felt that the extra available due to devaluation of the quetzal should more properly be invested in strengthening the health education component of the project.

Encourage a "bottom up" approach for creating strategies to meet the 12 hygiene goals and for disseminating messages on proper hygiene practices. This means involving field works and communities from the beginning.

Establish a system for measuring behavioral change using simple behavioral change indication at the community level and for evaluating the hygiene education program in relation to the twelve goals.

Strengthen water and sanitation committees at the state and local level and encourage the development of common strategies in relation to maintenance and hygiene education, create a community hygiene education team (CHET) within each committee. Involve women in the WS&S committees. Women could play roles in health education and in demonstrating the use of oral rehydration solution.

Strengthen hygiene education in primary schools in the project area through curriculum and materials development and coordination with WS&S committees, DSM, and the Health Education Unit. Train primary school teachers in the use of materials.

Maintain the $100,000 commitment to health education for the next two years and increase USAID financing for health education, if funds become available, to $370,000.

Place USAID supervision of the health education component within the Office of Human Resources Development, which is also linked to the promotion unit.

ATTACHMENTS

K. ATTACHMENTS (List attachments submitted with this Evaluation Summary; always attach copy of full evaluation report, even if one was submitted earlier)

Evaluation Report

MISSION COMMENTS ON FULL REPORT

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

The evaluation met the scope of work requirements. The evaluation team, as part of WASH, had extensive experience in this field in Latin America, enabling them to arrive at valid conclusions and recommendations with the guidance of the Mission Officials. The Mission is in full agreement with recommendations.