

A.I.D. EVALUATION SUMMARY - PART I

PD-ABH-178 85252

1. BEFORE FILLING OUT THIS FORM, READ THE ATTACHED INSTRUCTIONS.
2. USE LETTER QUALITY TYPE, NOT "DOT MATRIX" TYPE.

IDENTIFICATION DATA

<b>A. Reporting A.I.D. Unit:</b>  Mission or AID/W Office <u>USAID/BENIN</u> (ES# _____)	<b>B. Was Evaluation Scheduled in Current FY Annual Evaluation Plan?</b> Yes <input type="checkbox"/> Slipped <input type="checkbox"/> Ad Hoc <input checked="" type="checkbox"/> Evaluation Plan Submission Date: FY ____ Q ____	<b>C. Evaluation Timing</b> Interim <input type="checkbox"/> Final <input checked="" type="checkbox"/> Ex Post <input type="checkbox"/> Other <input type="checkbox"/>
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**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 No.	Project /Program Title	First PROAG or Equivalent (FY)	Most Recent PACD (Mo/Yr)	Planned LOP Cost (000)	Amount Obligated to Date (000)
680-0201	Benin Rural Water Supply	1980	9/92	8,682	8,682

ACTIONS

<b>E. Action Decisions Approved By Mission or AID/W Office Director</b> - Action(s) Required  Final audit of US prime and sub-contractor	Name of Officer Responsible for Action  S. Suggs C. Johnson	Date Action to be Completed  2/94
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(Attach extra sheet if necessary)

APPROVALS

**F. Date Of Mission Or AID/W Office Review Of Evaluation:** (Month) 07 (Day) \_\_\_\_\_ (Year) 93

**G. Approvals of Evaluation Summary And Action Decisions:**

Name (Typed)	Project/Program Officer	Representative of Borrower/Grantee	Evaluation Officer	Mission or AID/W Office Director
	Sherry E. SUGGS	André TOUPE Director of Hydraulics	Dennis BAKER	Thomas F. CORNELL
Signature	<i>Sherry E. Suggs</i>	<i>Andre Toupe</i>	<i>Dennis Baker</i>	<i>Thomas F. Cornell</i>
Date	11/05/93	9/11/93	3 NOV 93	

**ABSTRACT**

**H. Evaluation Abstract (Do not exceed the space provided)**

The project aims to assist the government of the Republic of Benin (GRB) to improve the health and living conditions of the rural population of the northern Zou department through increasing the availability to and quality of the water supply and improve sanitation facilities and the health practices of the rural populations. The project is a multi-donor effort involving the Peace Corps and UNICEF being implemented by a US based contractor and the GRB Ministry of Energy, Mines and Hydraulics. A final evaluation (September 1-21, 1991) and sustainability assessment (May 14-31, 1992) were conducted by USAID's Water and Sanitation for Health Project (WASH). The GRB-USAID/Benin team's evaluations were based on a review of project documents, interviews with project personnel and surveys with community socio-health development committees.

The purpose of these evaluations was to assess project's achievements, identify factors that facilitated or inhibited the achievements, identify lessons that could be drawn from the project and to determine what would be required to assure that the project achievements be sustained. The major findings and conclusions were:

- the project achieved all of its quantitative targets, in several instances surpassing expectations: 500 villages health committees created, 109 ventilated improved pit (VIP) latrines constructed in primary schools, 261 family VIP latrines constructed, 309 positive wells equipped with hand pumps, and the annual incidence of Guinea worm decreased by more than 30% in the project zone.
- the hand pump maintenance system is functioning well but its sustainability will require regular follow-up
- the use of a participatory and "cascading" training approach was well accepted by all project participants and contributed to project success
- health messages were clear and understood by villagers to the extent that they could repeat and explain them: some were being put into practice
- project benefits will be sustained if the rural economy grows and if all institutional structures in place function as expected. Additional assistance in the form of selected project activities will improve the probability that benefits are sustained.
- the project which was the first to implement the GRB policy of integrating water and health will offer a valuable model for future interventions in the sector

**C O S T S**

1. Evaluation Costs				
1. Evaluation Team		Contract Number OR TDY Person Days	Contract Cost OR TDY Cost (U.S. \$)	Source of Funds
Name	Affiliation			
James Chauvin	Water and Sanitation for Health Project (WASH)	PIO/T 680-0201- 3-10020	58,372	project
Suzanne Plopper	WASH			
Alan Malina	WASH	DPE-5973-Z-00		
Phil Roark	WASH	8081-00	?	WASH project
Deirdre LaPin	WASH			no. 836-1249
Elizabeth Kleemeier	WASH			
Regina Koffi	Ministry of Health/GRB			
Sylvain Sossou	Ministry of Plan/GRB			
2. Mission/Office Professional Staff Person-Days (Estimate) _____		3. Borrower/Grantee Professional Staff Person-Days (Estimate) <u>14</u>		

## A.I.D. EVALUATION SUMMARY - PART II

### S U M M A R Y

**J. Summary of Evaluation Findings, Conclusions and Recommendations (Try not to exceed the three (3) pages provided)**

**Address the following items:**

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| <ul style="list-style-type: none"> <li>• Purpose of evaluation and methodology used</li> <li>• Purpose of activity(ies) evaluated</li> <li>• Findings and conclusions (relate to questions)</li> </ul> | <ul style="list-style-type: none"> <li>• Principal recommendations</li> <li>• Lessons learned</li> </ul> |
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Mission or Office: USAID/BENIN	Date This Summary Prepared: July 1993	Title And Date Of Full Evaluation Report: Final Evaluation of the BRWSS project 11/91 Sustainability Assessment BRWSS 08/92
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The purpose of the project was to assist the Government of the Republic of Benin (GRB) to qualitatively improve the health and living conditions of the rural populations of approximately 250 villages in central Benin. More specifically the project was to assist the GRB to improve the health practices of and the adequacy and quality of water supply and sanitation facilities available to the rural populations.

To achieve this aim the project was to drill 275 positive wells equipped with hand pumps, construct 100 public and 300 family latrines, create and train village committees for self management of the water supply and conduct education campaigns related to health, water and sanitation and reduce the incidence of Guinea worm by 30% in the project zone. The project was designed to begin its activities in 1980, during the Water Decade, but as a result of numerous delays and false starts, the project began earnestly in 1987.

Two separate evaluations were undertaken as the project approached its project assistance completion date (PACD), first in 1991 and again in 1992. The 1991 final evaluation was conducted as per project planning to occur prior to the September 30, 1991 PACD. After the PACD was extended to September 30, 1992, this evaluation was supplemented with a sustainability assessment as the final evaluation raised questions as to the sustainability of the project benefits. Both evaluation teams used a similar methodology of a review of project documents, interviews with project authorities and project team members at the national, departmental and district level and surveys with community socio-health development committees. In all both teams visited more than 40 villages, where with the aid of questionnaires responses were elicited from villagers, management committees, pump repair persons, latrine masons and parts vendors. In July 1993, the mission conducted a follow-up visit to the project villages during which the same questionnaire was used. The results found were consistent with the findings in both previous evaluations.

*Socio-health component:* The purpose of this component was to help villagers acquire the organizational and financial management skills needed to maintain the pump and to adopt behaviors that enhance the health benefits of a clean water supply. While the component surpassed quantitative project targets (activities undertaken with more than 500 committees in lieu of the 275 planned), to assess the eventual application of all messages by village populations will require a longer period of time and will depend on consistent reinforcement by field agents. Nonetheless, the health campaigns were very effective, their messages were clear and understood by the villagers. Some are being practiced and villagers insist that the pump is their sole source for drinking water. The reduction in the incidence of Guinea worm by more than 30% bears this out.

Care and maintenance of the pump is being undertaken, with the pump sites and surrounding areas cared for and the villages able to collect funds necessary for maintenance and repairs. Some elements of the organization and management are problematic; in particular the GRB's policy of making annual contributions to the pump maintenance fund. In the villages perception and experience with repairs, the amount is excessive. After the initial collection to establish the fund, the village is likely to collect only the year to year costs of pump repairs.

Three actions are needed to assure sustainability; preserve the community health committee structure, improve or at least maintain personal health behaviors related to water and sanitation and maintain or increase health outcomes especially by using Guinea worm disease as a proxy indicator.

3

**Borehole construction:** The project objective was to complete 275 wells for a success rate of 50% and equip them with hand pumps by the end of the project. This objective was exceeded with a total of 309 boreholes drilled for a success rate of 79%. The rate of borehole production, although slower than expected at the beginning of the project, was not a hindrance to the project. In fact, it allowed time to set up the community development systems in the villages. No further well drilling is recommended for continuation of activities to increase sustainability.

**Latrine Construction:** The objective of this component was more to demonstrate the technology and train agents and masons rather than complete sanitary coverage of all project villages. Project finances, personnel and time were inadequate for the latter. Although the numerical objectives were not attained (109 public latrine and 261 family latrines constructed) the accomplishments were commendable. No further latrine construction is recommended for continuation of activities to increase sustainability.

**Headquarters construction:** The idea behind the headquarters was to congregate project staff from three ministries in the same physical location. This was accomplished as staff assigned from the three ministries as well as UNICEF and the departmental headquarters of the Hydraulic Service were together in the same complex. The down side of the move to Bohicon was that the Cotonou office closed and access to ministry personnel on the steering committee, communications, coordination between the project and national institutions became more difficult.

**Water quality analysis:** Bacteriological and physio-chemical testing of nearly every borehole in the project zone was conducted. Systematic physio-chemical testing has permitted a mapping of corrosiveness hardness qualities of the underground water in the area. This information is essential for choosing the most appropriate hand pump material. Future emphasis and bacteriological testing should be not only on the borehole but also on the quality of the water found in the home.

**Epidemiological surveillance:** Epidemiological surveillance of water related diseases as a means of determining the impact of the projects interventions on the improvement of the health practices of the participant populations was limited to Guinea worm incidence. Guinea worm prevention and control also became an objective of the project in the third project agreement amendment (1990). Weaknesses in the surveillance component however were noted; lack of baseline data and an established protocol at the start of the project, a lack of explanation of confounding variables on Guinea worm infection and the lack of time series analysis of the data in relation to when the project interventions occurred. To overcome these shortcomings an accepted and scientifically sound epidemiological surveillance protocol should be established, one common to all parties undertaken surveillance activities of Guinea worm and for economy of time and effort consider adopting a sentinel-site surveillance protocol.

**Pump maintenance:** A responsibility of UNICEF in the project design, the system established had three tiers; village committee, pump repair fund and village caretaker at the village level; private sector artisan repairman and merchant sellers of pump parts at the local/regional level; and training, supervision and regulation by the hydraulic service at the national level. Weaknesses which the project had begun addressing were; the pump caretakers were not trained nor equipped with tools for maintenance as planned; the national policy of annual contributions to the village pump repair fund was based on a more expensive pump and given the much lower annual costs of the India Mark II the villages in the project zone were reluctant to comply. The qualifications and responsiveness of the pump repair artisans was good and most are well accepted by the population. Some still lack sufficient tools and they may need credit to purchase them. The spare parts distribution system using a private sector supplier is fairly recent, June 1991, but seems to be functioning well.

**Economic analysis:** The cost per completed well for the borehole program are higher than expected, \$14,500 compared to the \$11,000 estimate in the project paper and \$9,700 for the Togo Rural Water Supply and Sanitation project. Latrine construction costs also ran higher than originally planned with public latrines costing on average \$618 and family latrines costing \$120 for the ventilated improved pit

model. As to the villagers willingness and ability to pay it was found that they are willing and able to establish a bank or credit union account and to generate the initial maintenance fund as a precondition to the well being installed. As for the annual renewal of the contribution, it is neither popular nor well observed.

**Lessons learned:**

- to maximize the effectiveness of water supply and sanitation projects and to ensure a common and integrated approach to their implementation, the socio-health component should take precedence
- project beneficiaries should be expected to contribute financially before the commencement of any activities that require long term maintenance
- health messages should be an integral component of primary school curricula, as a means of reinforcing water and sanitation messages
- providing pedagogic support materials, such as flip charts, to village trainers contributes to their credibility and to the clarity of the messages
- literacy is an essential element to the effective functioning of the management aspects of community development projects and, where appropriate and warranted, literacy campaigns should be integrated into all projects
- health messages on subjects that have immediate and visible effects give credibility to the trainers and to subsequent messages
- project aiming to influence human behavior should have a minimum five year time frame for the implementation and evaluation of the activities
- multi-donor projects require the coordinated fielding of the implementation teams. Where USAID and Peace Corps collaborate, USAID's project design cycle should govern the timing of team deployment as it would be preferable for volunteers to arrive later in project start-up rather than earlier as implementation is often slow in the initial phases.
- multi-donor projects require greater specificity in planning with careful attention and sufficient documentation on the participating agency roles, authorities, and responsibilities to avoid project management conflict.
- where UNICEF participates in a project predominately funded by USAID, the coordinating responsibility must be shared equally by both.

**Recommendation:**

Further support to ensure maintenance of benefits from the project is warranted. This assistance should continue for a period of two years for selected project activities so as to improve the probability that benefits are sustained. An estimated \$1,059,400 in direct costs will be needed to undertake the recommended activities under a new project. Considering all possibilities, Peace Corps appears to be in the best position to manage the new project. The key components of the new project would be to continue reinforcement of village development committees, continued monitoring of the operation and maintenance system, decentralization of the commune-level extension program to provide training to commune based health and education staff, community leaders and Guinea worm coordinators and the addition to the extension program of income generating activities.

## ATTACHMENTS

K. Attachments (List attachments submitted with this Evaluation Summary; always attach copy of full evaluation report, even if one was submitted earlier; attach studies, surveys, etc., from "on-going" evaluation, if relevant to the evaluation report.)

Final Evaluation of the Benin Rural Water Supply and Sanitation Project

Sustainability Assessment for the Benin Rural Water Supply and Sanitation Project

## COMMENTS

L. Comments By Mission, AID/W Office and Borrower/Grantee On Full Report

The following comments concern both the sustainability assessment performed in August 1992 as well as the final evaluation.

The evaluations satisfactorily addressed the Mission's Scope of Work (SOW) which was to assess the project's objectives in order to identify factors that facilitated or inhibited their achievement, identify lessons that could be drawn from the project and determine what would be required to assure the sustainability of project achievements. The reports raised serious concerns regarding the project's sustainability and the follow-up activities that need to be carried out.

Contractors visited project headquarters and sites. The evaluation methodology taken by the contractors was to interview individuals from participating organizations, and to contact persons from other organizations involved in related water and sanitation projects. A field questionnaire was used to elicit responses from villagers and management committees which enabled them to determine project impacts and problems.

The evaluations provided relevant analysis regarding the project status indicators and outputs. Comprehensive baseline data were developed with regard to project objectives. The analysis of project components indicated the benefits obtained and the constraints to their sustainability. Since very good epidemiological surveillance exists as part of the Guinea Worm disease, Guinea Worm was used as a proxy indicator for estimating the total health impact of the project. It should be mentioned that in the absence of reliable statistics, it was difficult to determine the project impacts on other water-related diseases.

Mission did not fully monitor the BRWS activities over the life of the project. USAID/Togo had this responsibility during several years. However, the results of the few field visits Mission staff carried out show that the evaluation findings, recommendations and lessons learned are useful.

As part of the preparation of the Mission CPSP, the evaluations provided valuable information on sanitation and primary health care sectors and therefore served as a basis for planning and implementation of possible future activities.