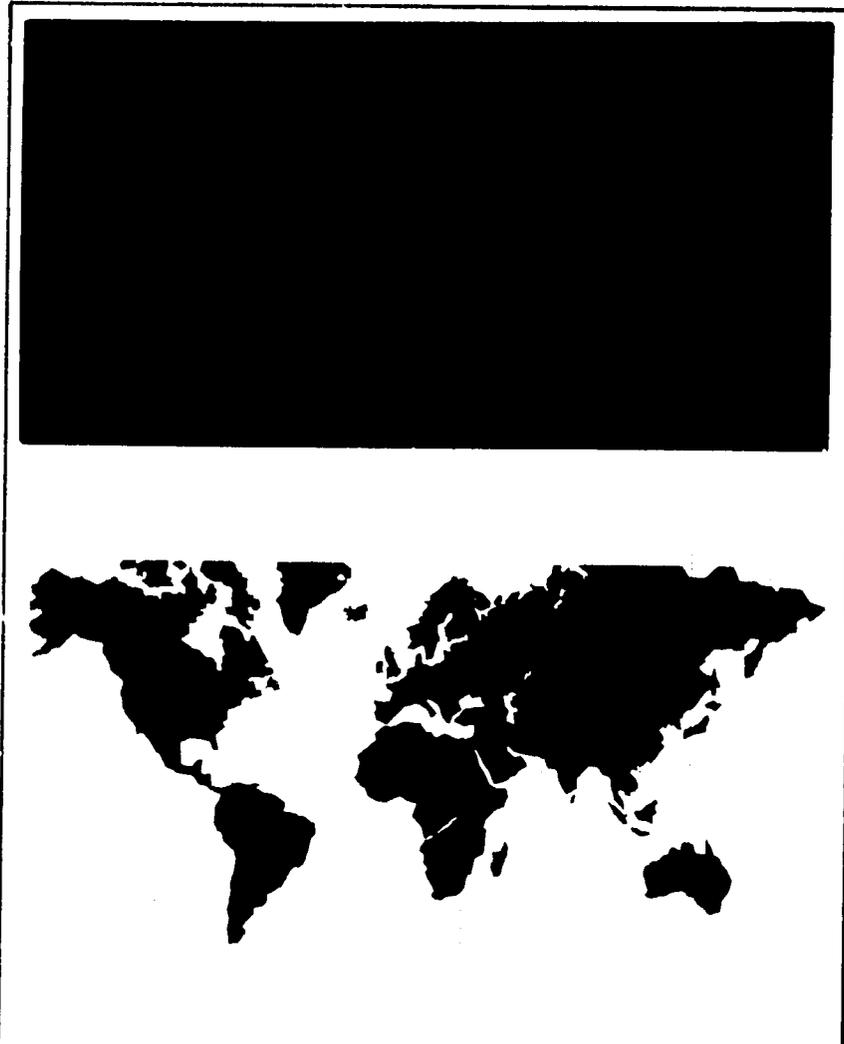


THE  
INSPECTOR  
GENERAL



Regional Inspector General for Audit  
NAIROBI

PDAAN 678

AN ASSESSMENT OF THE RURAL  
WATER BORNE DISEASE CONTROL PROJECT  
IN SWAZILAND  
PROJECT NO. 645-0087

AUDIT REPORT NO. 3-645-84-03  
NOVEMBER 23, 1983

AN ASSESSMENT OF THE RURAL  
WATER BORNE DISEASE CONTROL PROJECT  
IN SWAZILAND

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## EXECUTIVE SUMMARY

### Introduction

The Rural Water Borne Disease Control (RWBDC) Project (No. 645-0087) began in Swaziland on August 30, 1979, with a Project Assistance Completion Date (PACD) of September 30, 1985; later extended to February 28, 1986. Planned AID financing over the life of the project is \$3.3 million. The Government of the Kingdom of Swaziland (GOS), through its Ministry of Health (MOH), is to contribute \$1.3 million in project inputs. This represents a 29 percent project contribution which meets the 25 percent host country contribution required by Section 110(a) of the Foreign Assistance Act.

Project implementation began with a \$2 million technical assistance contract between AID and the Academy for Education Development (AED), a United States-based firm. The contract was dated November 24, 1980 and has an estimated completion date of November 30, 1985. As of August 4, 1983 project disbursements totaled about \$1.3 million.<sup>1/</sup>

The problem addressed by the RWBDC project is the high morbidity and mortality associated with water-related diseases in rural Swaziland. The immediate goal of the RWBDC project is to improve the water use and sanitation habits of the rural population. The project purpose is to expand the capacity of the GOS to deliver effective preventive health services to combat diseases related to water and poor sanitation.

### Purpose and Scope

The purpose of the audit was to determine whether (a) the project was accomplishing its objectives, (b) AID funds were expended as planned, (c) the contractor was performing satisfactorily and operating within the provisions of the contract, and (d) USAID/Swaziland was adequately monitoring the project.

We reviewed USAID/Swaziland, AED, and GOS records, reports, and correspondence; and held discussions with selected officials of those organizations. We visited project sites in both Mbabane and Manzini, Swaziland and the surrounding areas. We made the audit during August 1983, and focused on project activity for the period August 1979 to August 1983.

<sup>1/</sup> 39.4% of the planned AID financing.

## Findings, Conclusions and Recommendations

The major obstacle affecting project progress centered on the project's health education component. We found that it was experiencing implementation problems which threatened institution strengthening and the achievement of lasting project benefits.

The Health Education Unit (HEU) of the GOS's MOH is critical to the success of the project because better health revolves around better health education. Unless prompt corrective action is taken to solve the health education component's implementation problems, the component risks failure (pages 3-6).

Other areas which required management's attention are summarized below and detailed in the following sections of this report:

- Project implementation was not progressing as planned. While the schistosomiasis component of the project was proceeding as planned, there were other project components that developed differently than originally conceived. These changes had not been documented since the project was designed and implemented. Accordingly, USAID/Swaziland and the GOS needed to assess whether project implementation was now responsive to the achievement of the project's purpose and goal (pages 6-9).
- USAID/Swaziland's monitoring of the GOS's contributions to the project needed to be improved. USAID/Swaziland had neither attempted to quantify nor compiled an accounting of these contributions to determine if the GOS was fulfilling its agreement (pages 9-10).

## Conclusion And Recommendations

The Rural Water Borne Disease Control project was making satisfactory progress in some areas while not progressing as planned in others. Five recommendations are made to improve the project's chances for lasting success.

## USAID/Swaziland Comments

Audit findings were discussed with USAID/Swaziland, and a draft audit report was provided for their written comments. We have used the USAID's comments to strengthen, amplify and clarify this report as considered necessary.

## BACKGROUND

### Introduction

The Rural Water Borne Disease Control (RWBDC) Project (No. 645-0087) began in Swaziland on August 30, 1979, with a Project Assistance Completion Date (PACD) of September 30, 1985. The PACD was later extended to February 28, 1986. Planned AID financing over the life of the grant project is \$3.3 million. The Government of the Kingdom of Swaziland, (GOS), through its Ministry of Health (MOH), is to contribute \$1.3 million<sup>1/</sup> in project inputs.

Project implementation began on November 24, 1980 with a \$2 million technical assistance contract between AID and the Academy for Education Development (AED). As of August 4, 1983, project disbursements totaled about \$1.3 million.

Approximately 88 percent of Swaziland's 520,000 inhabitants live in rural areas. Most of them are concentrated on 56 percent of the total land area known as Swazi Nation Land where a traditional land tenure system prevails. These people live in approximately 50,000 dispersed homesteads with each settlement area surrounded by fields.

The combination of unsafe drinking water and inadequate sanitation facilities constitutes one of the major causes of death and disability among the poor in developing countries. The World Health Organization estimates that more than 25,000 people (most of them children) die each day from water and hygiene-related diseases. Less than one-half of the people in developing countries have reasonable access to reliable sources of safe drinking water and a satisfactory means of excreta disposal. Most of those who lack reasonable access to these sources live in rural areas.

Most Swazis incorporate both traditional and modern concepts into their view of the causes of illness, and they use both health systems. Traditional beliefs are not easily dismissed, even though people recognize the value of the modern medical world. Improvement in the supply of water is considered a high priority among rural dwellers, especially the women. In a 1979 study, virtually all the respondents expressed the desire for improved water systems, emphasizing the need for piped clean water.

<sup>1/</sup> This represents a 29 percent project contribution which meets the 25 percent host country contribution required by Section 110(a) of the Foreign Assistance Act.

The RWBDC project addresses the high morbidity and mortality associated with water-related diseases in rural Swaziland. Swaziland suffers from a number of diseases which are the result of poor environmental sanitation, improper excreta disposal, and contaminated water supplies. Basic health services in the form of rural clinics provide fairly reasonable coverage, but are still curatively oriented and have not focused on the main cause of water-borne diseases which is poor environmental sanitation.

The immediate goal of the RWBDC project is to improve the water use/control and sanitation habits of the rural population. The project purpose is to expand the capacity of the GOS to deliver effective preventive health services to combat diseases related to water and poor sanitation. Planned project outputs are:

Health Education A Knowledge, Attitudes, and Practice study is to be completed, interpreted and used to design the content of a health education program. The AID-funded education advisor is to assist the MOH in the development of a national health education strategy and plan. Also, 312 community health workers are to receive in-service training on an annual basis.

Schistosomiasis Survey A national survey of schistosomiasis prevalence is to be conducted with the assistance of the AID-provided epidemiologist and short-term statistician.

Sanitation Program This component is to form 200 community sanitation committees to serve as resource people for the sanitation program.

Public Health Engineering and Sanitation All designs for dams, reservoirs, fishponds, water supply systems, irrigation schemes, and other major water works planned during the project life are to be reviewed by the U.S. Public Health Engineer and his counterpart. The reviews will result in recommendations concerning the potential health implications of the designs.

#### Purpose And Scope

The purpose of our audit was to determine whether (a) the project was accomplishing its objectives, (b) AID funds were expended as planned, (c) the contractor was performing

satisfactorily and operating within the provisions of the contract and (d) USAID/Swaziland was adequately monitoring the project.

We reviewed USAID/Swaziland, AED and GOS records, reports and correspondence; and held discussions with selected officials of those organizations. We visited project sites in and about Mbabane and Manzini where various buildings and latrines had been constructed with project funds.

### FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

#### The Health Education Component Was Experiencing Implementation Problems Which Threatened The Achievement Of Lasting Project Benefits

The Health Education Component (HEC) was not making satisfactory progress mainly because the Health Education Unit lacked a leader. This leadership problem also affected the reaching of project targets in other significant areas such as the participant and in-service training programs.

The HEC had not made substantial progress because specific leadership responsibilities had not been defined despite the fact that 60 percent of the planned time had elapsed. Further, this component was experiencing implementation problems which threatened institution strengthening and the achievement of any lasting benefits from the project. USAID/Swaziland personnel were aware that this component was delayed and was experiencing implementation problems. They told us that the most significant defect was the need for firm leadership. Thus the GOS through the MOH must now take action in this area to insure progress.

The project's major focus was health education. Accordingly, the approach to achieve desired education results centered on the development of the institutional capacity within the GOS to plan and implement programs which would affect rural people's attitudes and practices toward health. The project addressed MOH health education constraints, which included the lack of trained personnel and equipment to design and implement an education program on the basis of community needs. The project was to develop the Health Education Unit (HEU) so that it could lead the way to organize and train existing field workers to foster a health education program.

The primary reason that the health education component made little progress was because the contract health educator initially assigned to the project proved to be unsatisfactory. The reasons the educator was rated unsatisfactory was because of an inadequate job performance and a poor working relationship with the Swazi Nationals. As a result, AED, in

cooperation with USAID/Swaziland and the GOS, recalled the health educator in May 1982. A replacement arrived in Swaziland in February 1983. Consequently since the date the contract with AED was signed in 1980 the component had been without leadership and adequate technical assistance. Under these circumstances, it was understandable that the project was behind schedule.

We found, however, that even with the arrival of the second health educator, the chances to establish an improved HEU were still not good. Several problems remained to be overcome. Foremost among the problems facing the health education component was that the GOS still had not officially established leadership for the HEU.

The project paper stated that the AID Health Education Advisor would provide leadership to the HEU subsequent to a World Health Organization (WHO) consultant's departure and prior to the Swazi Director completing the necessary graduate training. It is clear that the project intended that the AID advisor would lead the HEU during this period. However this had not occurred because the WHO consultant's tour of duty was extended until 1985, and the GOS had not stated in writing that the AID advisor was the HEU leader. Consequently the HEU staff still considered the WHO advisor to be the unit manager. The result was that the AID advisor was not as effective as he could have been because he lacked the authority to implement his programs.

The leadership problem facing the health education component also delayed progress in other significant areas such as the participant training and in-service training programs.

The project planned that the health education component would have achieved the following results by August 1983.

- Posts for HEU staff established.
- National Health Education Plan finished and submitted to MOH for approval.
- Health Assistants received in-service training and attended seminars.
- Swazi HEU Director returned from training to assume position.
- AID Health Education Advisor acting as counterpart to HEU Director.

Amplification of these problems and how they adversely affected the viability of the HEU follow:

Four posts for District Health Educators were to be filled by October 1, 1983. Although the MOH had requested establishment of the posts, the GOS had put a government-wide freeze on establishing new positions. Thus, it was not known if the GOS

would approve the positions. These positions are essential because the on-board health assistants presently lack the health education support which was to be provided by the District Health Educators.

The HEU was a budgeted entity, but the HEU positions had not been officially established by the GOS. The nurse-educator positions were filled by transferring nurses to the HEU. Thus these persons were still considered "nurses" in the GOS personnel registry because health educator positions had not been established. This was demoralizing to the HEU staff because they believed they would not have job security once the project ended.

Progress was delayed on completing the National Health Education Plan. The AID Health Education Advisor had submitted a planning strategy both to the USAID and the MOH in May 1983, but the MOH had made no comment as to its acceptance. One result of the lack of leadership at the HEU was that the specific responsibility to develop the detailed National Health Education Plan, which included following up on its implementation, had not been fixed. Consequently, progress lagged.

There had been very little in-service training of health assistants. The training program was still in the planning and discussion stage. The only workshop conducted, which was attended by 25 health assistants and five community development officers, was held in June 1982. None have been held since that time. Two more workshops were planned, but as yet not scheduled. One of the two workshops was to discuss community participation and the other was to focus on spring protection.

USAID/Swaziland, the GOS and the project's contract staff realized that management was a problem in the Health Service Inspectorate and that in-service training was not proceeding well. They have arranged for the services of a management consultant who is scheduled to arrive in Swaziland in early FY 1984. These services will include preparations for an in-service management training program. Only then will staff development move forward.

Finally, the project planned that one participant would be trained to the M.Sc. level in health education in two years. However, the participant designated to be the HEU Director, did not have a B.Sc. degree and therefore was sent to a four-year B.Sc. program. Thus this individual will not complete the training until the summer of 1985. Consequently the participant will have no overlap with the AID Health Education Advisor who is scheduled to leave at about the same time.

While the health education component had achieved success in the design and production of mass media support for the water

and sanitation programs and in the oral rehydration therapy campaign it missed the mark in other areas. It had made very little progress in achieving the above stated planned results and in developing a viable HEU. This was critical if the project was to achieve lasting benefits.

#### Conclusion and Recommendation

The health education component was not making progress largely because the HEU was without definite leadership. The lack of leadership resulted from the failure of the GOS to clearly define the respective leadership roles of the WHO advisor and the USAID advisor. Further, unless prompt corrective action is taken to solve the above-mentioned implementation problems, the health education component risks failure.

##### Recommendation No. 1

USAID/Swaziland ensure that the GOS defines and establishes, in writing, leadership responsibilities for the Health Education Unit.

##### Recommendation No. 2

USAID/Swaziland (a) ensure that the GOS develops a plan to establish official government posts for all HEU positions in accordance with the Project Agreement; (b) ensure that the GOS reviews and comments on the strategy for a National Health Education Plan so the development of the plan can move forward; and (c) in conjunction with the GOS, ensure that specific workshops for health workers are planned so the training of health assistants can progress.

#### Deviations From Project Design Needed To Be Better Documented And Evaluated

Project implementation was not progressing as planned. While the schistosomiasis component of the project was proceeding as planned, there were other project components that developed differently than originally conceived. Further, project modifications were not documented in a timely manner because the contractor had neither developed annual work plans nor had the USAID required him to do so.

The problem addressed by the project was one of the high morbidity and mortality associated with water-related disease

in rural Swaziland. A major component of the project was a schistosomiasis survey; the results of which were to be used to identify communities which deserved priority provision of water supplies, health education and pit latrines.

The results of the schistosomiasis survey were to be used to identify factors affecting the transmission of water related diseases, to establish planning priorities and to determine intervention strategies. Some of the survey results had already been used to establish priority areas for the drilling of wells. But a USAID official told us that both USAID/Swaziland and the GOS now needed additional guidance on the specific direction this project component should take since the schistosomiasis survey results were being finalized. This had not been accomplished at the time of our audit.

Deviations from planned design occurred during the implementation of other project components. Two examples follow:

The project was to form 200 community sanitation committees to serve as ongoing resource people for the sanitation program. This was not done because early attempts to organize such single purpose committees were unsuccessful, and the target of 200 committees was unrealistic. Further, other community development workers and organizations, such as rural health motivators and extension officers, proved effective vehicles for promoting and implementing the sanitation program. Project officials determined that it was not practical to try to form new committees. Instead, they decided to try to identify communities with high development potential, identify the most effective development committees, and provide guidelines to enable health assistants to select communities and use existing organizations more effectively. If these revised procedures proved to be satisfactory, they should be documented and the implementation plan revised. In addition, the results could be referred to senior management in AID/W to be used as a lessons learned exercise for other projects having similar activities.

The U.S. Public Health Engineer and counterpart were to review all designs for dams, reservoirs, fishponds, water supply systems, irrigation schemes and other major water works planned during the project life for potential health implications of the designs. This was not done because the MOI and the Rural Water Supply Board, in consultation with USAID/Swaziland, determined it was not practical to review all designs for water projects. Instead, the U.S. Public Health Engineer and counterpart will advise agencies involved in water resources development projects, develop guidelines for planning and design, develop water quality criteria, develop and advise on appropriate technologies and designs, and maintain liaison with Ministries involved in health and the development of water resources. Thus, a more efficient use of a valuable resource

may have been developed. Accordingly, one can draw the same conclusion discussed in the preceding example.

The technical services contract required two annual detailed project implementation plans to have been developed by the contractor at this point in the project (August 1983). Only one work plan had been prepared. The contractor had not completed the task to update project plans and schedules. We are concerned about this delay in planning because the project had not proceeded as planned and project changes had not been documented in a timely fashion; and output targets were not restated where necessary.

An implementation schedule is useless as a tool for managing and monitoring a project unless it is updated to reflect actual accomplishments. Updating involves not only inserting in the schedule "actual" for "planned" dates as they occur, but also reviewing or assessing the impact which a delay -- or, occasionally, a speed-up -- may have on the overall schedule. This review should include an analysis of the necessity or advisability and cost of rescheduling other activities to permit, if possible, adherence to the overall schedule or, at least, to mitigate the negative effects of a change. Such reviews and analyses will be of little value if schedules are not updated periodically or, at a minimum, whenever a substantial delay in an event becomes apparent. Updating schedules and changing the scheduled sequences and durations of activities are essential elements of project management. Having to change a schedule should, therefore, not be viewed as a sign of "failure" to maintain progress. If done after a thorough analysis of the situation and with the intent of optimizing remaining project actions, schedule changes can be evidence of good project management. Besides, from the viewpoint of AID monitoring, periodically comparing actual accomplishments with schedules provides an opportunity for dialogue and consultations with the host government and contractors directed toward activity forecasting and finding the most cost-effective approaches for completing the remainder of a project.

The project is scheduled for a mid-project evaluation in October or November 1983. This schedule is timely due to the several implementation deviations from the original design.

#### Conclusion And Recommendations

Project implementation was not going as it had been originally planned, largely due to the time lag between the design phase and implementation phase. Also, changes in its implementation were not documented. USAID/Swaziland and the GOS now needs to assess whether the project as it is being implemented will achieve the project purpose and goal.

Recommendation No. 3

USAID/Swaziland ensure that the upcoming project evaluation addresses (a) whether the project implementation changes that have occurred were proper and (b) whether the project as it is being implemented will achieve the project purpose and goal.

Recommendation No. 4

USAID/Swaziland assure that implementation plans are brought up to date and require the contractor to document on a timely basis any revisions to planned project outputs and targets.

USAID/Swaziland's Monitoring of GOS Contributions to the Project Needed To Be Improved

USAID/Swaziland did not have a procedure in place to determine and document the GOS's agreed-to financial contributions to the project. Thus, we were unable to learn with any precision what inputs to the project the GOS had made. The Project Grant Agreement for the RWBDC project dated August 30, 1979 stated:

"The resources provided by Grantee for the Project will be not less than the equivalent of US \$1,319,200, including costs borne on an "in-kind" basis."

Although USAID/Swaziland had been monitoring the project, it had not attempted to make an accounting of the GOS contributions to the project. We believe that this was a shortcoming in USAID/Swaziland's project monitoring. As a result USAID/Swaziland did not know with certainty whether the GOS was meeting its agreed-to financial commitment to the project.

Conclusion And Recommendation

USAID/Swaziland had not attempted to quantify and compile an accounting of GOS contributions to determine if the GOS was fulfilling its agreement to contribute to the project. In our view this was a shortcoming in USAID/Swaziland's project monitoring. Thus we believe that USAID/Swaziland should assist the GOS to develop a procedure which will enable them to report the progress they are making in meeting its financial commitments as stated in the Project Agreement.

Recommendation No. 5.

USAID/Swaziland, (a) determine if the GOS has made its agreed-to contributions to the project and in conjunction with the GOS (b) develop a reporting procedure which depicts the grantee's contributions to the project and the frequency which the reports are to be submitted to the USAID.

LIST OF REPORT RECOMMENDATIONS

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<u>Recommendation No. 1</u>	6
USAID/Swaziland ensure that the GOS defines and establishes, in writing, leadership responsibilities for the Health Education Unit.	
<u>Recommendation No. 2</u>	6
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<u>Recommendation No. 3</u>	9
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<u>Recommendation No. 4</u>	9
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<u>Recommendation No. 5</u>	10
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APPENDIX B

LIST OF REPORT RECIPIENTS

	<u>No. of Copies</u>
<u>Field Offices:</u>	
USAID/Swaziland	5
REDSO/ESA	1
<u>AID/Washington:</u>	
AA/M	1
AA/AFR	5
AA/PPC	1
LEG/OD	1
GC	1
IG	1
OPA	1
AFR/SA	2
M/FM/ASD	2
PPC/E	1
PPC/E/DIU	2