

INTERNATIONAL REFERENCE CENTRE  
COMMUNITY WATER SUPPLY AND  
SANITATION

824 GH8089

TECHNICAL ASSISTANCE TO THE  
BOLGATANGA COMMUNITY WATER AND SANITATION  
MANAGEMENT PILOT PROJECT

TERMINAL REPORT

GHANA WATER AND SEWERAGE CORPORATION  
—  
UNITED NATIONS DEVELOPMENT PROGRAM  
—  
WORLD BANK

Bipin Joshi  
Project Advisor  
February 1990

15N 10065  
824 GH8090

824-GH8089-10065

# TERMINAL REPORT

## TECHNICAL ASSISTANCE TO THE BOLGATANGA COMMUNITY WATER AND SANITATION MANAGEMENT PILOT PROJECT

### INTRODUCTION

Under the UNDP/World Bank Global INT/81/026 Project, "Field Testing of Rural Water Supply Handpumps", Bolgatanga District, Upper Region was identified for the testing of selected handpumps from 1983-87. The programme was integrated into a CIDA assisted rural water supply project which included over 2600 boreholes equipped with mainly Moyno and Monarch handpumps.

The testing programme included a total of 163 handpumps of 5 different manufacturers - three makes being traditional reciprocating lever operated handpumps and the other two were of the village level operation & maintenance (VLOM) categorization. All of the handpumps were field tested and their performance checked periodically. In addition to the standard monitoring programme, the project team also carried out preventive maintenance and from time to time repaired defective testpumps. In respect to operation and maintenance, all pumps in the Region, including the two types of VLOM pumps, were the responsibility of Handpump Maintenance Unit of the Ghana Water and Sewerage Corporation (GWSC), Upper-East Regional office.

Some modifications by the manufacturer to the Monarch handpump were carried out after receiving feed back from the field. One of the testpumps, a PEK direct action model, had to be removed from the programme very shortly after being installed due to poor performance and non-acceptance by the communities.

In the later part of the project two University of Science and Technology (UST), Kumasi handpumps were also installed in the project area. Though the handpumps were not originally included in the testing programme their performance were monitored and the problems encountered in the field were reported to UST.

During the programme emphasis was placed on preventive maintenance which involved regular checks and repairs. Workshops on the maintenance and repair of the new types of handpumps and the inspection procedures for all types of handpumps in the region were also conducted for the mechanics of Handpump Maintenance Unit of GWSC.

### FOLLOW-UP PILOT PROJECT IN COMMUNITY MAINTENANCE

Donor supported centralized maintenance systems are presently ensuring the operation of the handpumps at considerable cost. A major area of concern for the rural water supply sector is in identifying a sustainable means of maintaining VLOM systems. There is growing consensus that since the pump communities are the beneficiaries of the rural water supplies they should be involved in all aspects of planning, implementation, operation, and in the management of maintenance of rural water supply and sanitation projects. This will require a change from the centralized management (regional, district) currently provided by the Ghana Water

and Sewerage Corporation to a decentralized system of community management.

In July of 1988, with the assistance from CIDA the Ghana Water and Sewerage Corporation together with the UNDP/World Bank Water and Sanitation Programme initiated the "Bolgatanga Community Water and Sanitation Management Pilot Project" which includes 50 pump communities in the Bolgatanga District of Upper East Region. The Bolgatanga project intends to determine if these communities are willing and able to take direct responsibility for managing their water and sanitation facilities. For this purpose the VLOM concept was introduced, whereby the project will assist communities to improve their technical and managerial skills helping them to resolve problems which affect the sustainability of their water and sanitation facilities.

The project is guided by one Project Team Leader who is a GWSC employee, and one World Bank/UNDP Technical Assistant. The Project Team Leader is assisted by staff seconded to GWSC from the Department of Community Development (DCD), Department of Social Welfare (DSW), and the Ministry of Health. Apart from these staff from the various departments there are seven community based extension workers who are selected from the communities. These Village Extension Workers (VEWs) are the front line workers who serve the link between the project staff and the communities.

The UNDP/World Bank Technical Assistant is now finishing with his input. This report is meant to summarize those inputs to the project.

#### PROJECT OBJECTIVE

Over the period of three years the project's objectives have been set as:

- develop a strategy for transferring responsibility for the maintenance of handpumps to the communities; setting up a spare part distribution system; and establishing a village system of fund mobilization and savings to pay for spare parts and eventual pump replacement.
- develop an implementation strategy and training methods for possible replication in other rural projects.
- develop a strategy for promoting the installation and use of household latrines.
- assist to implement primary health care programmes.
- emphasize the involvement of women in playing leading roles in the community management.
- develop information to assist in the selection of standard handpumps for Ghana.
- manpower development in water and sanitation sector.

## ACHIEVEMENTS

Since the primary focus of the project is the pump community, the project has adopted a method of maintaining frequent contact by organizing meetings with relevant groups in each community. A Water and Sanitation Management Committee (WASAMC) has been formed at each of the pump communities. Community ideas related to water and sanitation issues are solicited to arrive at appropriate and acceptable options which are used by the VEWs as the basis for training the WASAMC members. They (WASAMC) are directly responsible for the management of their own water and sanitation facilities.

Women being the primary drawers of water, have been encouraged to play the leading role in managing the project. Out of 7 WASAMC members 3 are women; but at times the number is more. To emphasize active participation by the women in the project area, women's groups were formed or reactivated. These groups operate their own bank accounts which are separate from the community bank accounts. Since a high percentage of the men travel to southern Ghana during dry season to look for temporary jobs, more and more women are encouraged by the communities to fill the gap created by the employment migration.

The first phase of village mechanic and health worker training has been completed. The training was done by the VEWs under the supervision of the project staff. To simplify the terminology, the name of different components of the handpumps have been given local names. Some simple songs about water and health has been composed in local language and recorded. The project is aiming at giving the water and health messages to the children through the medium of songs. The Radio Learning Program of Water Utilization Project covers the project area. The training of the rest of the WASAMC members will be done before the onset of the rainy season.

## CONSTRAINTS

Minor problems were encountered right from the beginning of the project. Initially it was the selection of an area to include 50 handpumps. This area had an additional requirement which necessitated that it should be one of the catchment area (sub-area) created by WUP for their mass training so as to avoid confusion.

Since new ideas are to be introduced to the communities a regular contact with them had to be cultivated which was not possible until the recruitment and training of VEWs.

Sanitation is a secondary issue behind water supply to the communities. More education and encouragement is needed to assist in completing the latrines for which the individuals had shown much interest in the beginning. They still feel that the materials should be provided free of cost and project should provide the mason to complete the work. Four local masons have been trained to construct the type of latrine promoted by the project. These masons have been introduced to the communities and the project is hoping that these masons will promote the latrine in their communities.

Though handpump maintenance and health messages are simple to understand, the training would have been simpler with good training materials and visual

aids, these are still required.

ISSUES RAISED:

In the community based project regular contact with the communities is very essential. With the limited number of project staff this will not be possible and recruitment of extension workers is also not feasible if such projects are done in larger scale. A method should be worked out to make use of the existing extension workers of various departments through normal procedures.

The communities should be involved right from the beginning of the project so that they feel that the project belongs to them and take the responsibility of maintaining them.

Community managed water and sanitation facilities is a new concept and there are many issues which are not yet clear. At the same time no matter how simple a technology might be, a complication can arise at any time. To tackle such problems there should be back-up systems.

Since it is a community based system they should be certain to have sufficient funds to cater for emergency purposes.

These new types of VLOM handpumps should be managed on the principle of preventive maintenance. There is a general concern that when the community is obligated to pay for the replacement parts whether they will replace them when the proper time arises.

The technology being simple there are chances of misuse of the knowledge acquired.

There is also concern that if a handpump does not require regular replacement of parts (as in Volanta) and if there is no breakdown for long period then the mechanics might forget what they have learned when the time comes for them to make use of their knowledge.

Since the handpumps or the parts for the pumps are not manufactured in the country, some agency like GWSC should take the initiative to import and control the price.

The ownership and rehabilitation of the borehole is also an issue.

*Bipin Joshi*  
*February 1990*