

Partnership in rural water supply and sanitation: a case study from Bangladesh

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A non-governmental organization (NGO) for drinking water supply and sanitation conducted a two-year rural Water Supply and Sanitation (WSS) project in wide areas of rural Bangladesh. The project provided handpumps, latrines, and hygiene education to rural people through NGO partners. Its performance was evaluated through interviews with women users, women pump caretakers and trainers from partner NGOs.

Of 295 health NGOs (partners), 233 NGOs participated in the water supply programme and 153 of them participated in the sanitation programme. This multi-agency collaboration demonstrated the potential for reaching widespread underserved and unserved people in a logistically efficient way. About 100 000 people were provided with access to handpumps. The potential for revolving the financial assistance in sanitary latrine production/promotion was observed. The project, however, lacked the 'soft-ware' achievements, that is, community participation, personal hygiene practices and effective use and maintenance of the WSS provisions. This reconfirms the difficulties experienced in this field, even at multi-agency collaboration levels. Sustainable measures for 'hardware' as well as 'software' activities should be addressed appropriately at multi-agency levels also.

Background

In Bangladesh, surface water is abundantly available, accessible, and convenient to use for most of the population. Often children are inseparably associated with the water environment, making almost daily contact with ponds, ditches, canals, and rivers.¹ But the microbiological quality of the water is unacceptably low.² The recommended source of domestic water is groundwater, mostly extracted through tube-wells, a technology spread widely in the past fifteen years. Less than 75% of the population have provisions for sanitary disposal of faeces. Water-borne and water-related diseases account for probably over 80% of all illnesses.³ There is undoubtedly a need for able and wide reaching partners to help the Government of Bangladesh to face this WSS challenge for its population of more than 11 million.

One of the strategies of the government (and UNICEF, Bangladesh) is to bring on board new partners for both communications activities and

service delivery in the WSS sector.⁴ Non-governmental organizations (NGOs) have come forward to improve the water and sanitation situation in Bangladesh, successfully but sporadically complementing the efforts of the government. Hardly any attempts have been made to review and document their successes and failures or the needs for their capacity building. Nor has there been much effort to explore the replicability or further possibilities of their accomplishments.³

The NGO Forum, a non-governmental organization, has been actively involved in the WSS activities in Bangladesh.⁵ In 1990 an evaluation was made of the performance of the NGO Forum in a WSS project, the objective of which was to conduct WSS activities through local NGOs who were collaborators (partners) in the project. This paper briefly presents the findings of the evaluation. These findings may help to plan for and implement more effective WSS activities through partnership and multi-agency collaboration and cooperation.

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The Project

The project, 'Integrated Water and Sanitation Program through NGO', was launched in early 1988. It was funded by MISEREOR of West Germany and conducted by the NGO Forum. The main objectives of the project were (i) to provide appropriate low-cost technology for water and sanitation, (ii) to foster better inter-agency collaboration in water and sanitation services through motivational and training efforts, and (iii) to raise community consciousness through promotion of safe water use and hygienic disposal of human excreta.

The NGO Forum is an autonomous resource and service group affiliated with the Association of Development Agencies in Bangladesh (ADAB), a major apex body of the NGOs working in all fields of development in Bangladesh. The ADAB has 13 chapters at the district level to identify the needs of the member (partner) NGOs, to extend support services, and to make the NGOs effective in their development activities.

The WSS project activities were administered through a special arrangement among the project personnel (project secretariat) and ADAB. The ADAB provided institutional support and helped in establishing contacts with partner NGOs. The project secretariat attended the bi-monthly ADAB district meetings and motivated partner NGOs to participate in WSS projects. The partner NGOs were responsible for proper implementation and monitoring of the project activities. The project secretariat was responsible for overall supervision as well as for successful completion of the project.

The NGOs which agreed to collaborate in the project were asked to send their specified number of fieldworkers (NGO trainers) to the 5-day training workshops of the project. The training module consisted mainly of courses on community management, tubewell and latrine technologies, and health benefits of the use of WSS provisions.

The project had funds for providing a specified number of tubewells to the underserved/unserved people of some areas. The partner NGOs were advised to propose their required number of tubewells, and in these working area

meetings, the project defined criteria for tubewell site selection. The criteria were similar to those of the existing site selection for public tubewell installation by the government.⁴ The main conditions were to provide tubewells to the people who were underserved/unserved, to make the tubewell accessible to more than 5 families, to meet the physical requirements for tubewell installation, and to influence more than 50% of the expected users' families to build latrines. Field Program Officers of the project secretariat visited the sites selected by the NGOs, verified the site selection criteria and reported to the Senior Program Officer by filling out a tubewell installation form. To make construction of latrines affordable by the families, they were often encouraged to build hygienic latrines (home-made sanitary latrines) by digging a pit and covering it with a holed platform made of materials like branches, wood, or bamboo.

The NGOs were then allocated the required components of a specific number of tubewells and materials for constructing platforms around them. They carried the components to their sites and motivated the community to pay for installation of the tubewells and construction of the platforms. Following installation the Field Program Officer visited the site and prepared a work completion report. During the delivery of tubewells, one-day caretaker training on hand-pump maintenance was given to an identified woman (caretaker) from the families using each tubewell. These were women identified as caretakers by the community and the NGOs.

At every working area, the project personnel discussed their activities with representatives from existing offices of the Directorate of Public Health Engineering (DPHE) of the Government of Bangladesh, UNICEF, and local leaders. They were informed about the programme and plans so that the tubewell installation was not duplicated by other groups.

The NGO Forum undertook the sanitation programme through two main approaches: (i) by combining construction of latrines with site selection criteria for tubewell installation, and (ii) by providing some funds to 40 of the partner NGOs to set up a Sanitation Centre for building components of pit latrines. The funds were specified for procuring materials and mould sets

for producing 100 latrines. The workers of the partner NGOs were given special training on construction of latrines. These NGOs were told to revolve their funds by selling the latrines to the rural people.

Promotional and motivational activities on acceptance and appropriate use of facilities, maintenance and hygiene practices at targeted community level were done by NGOs through their project trained workers. These NGOs were encouraged to buy printed promotional leaflets from the project secretariat at subsidized cost. However, brochures and newsletters were distributed free of charge.

Method of study and data collection

During this study 32 field sites across the country were randomly visited. During these visits 192 women users, one each from 192 families, were interviewed and their facilities spot-checked. As many as 32 women handpump caretakers and 42 trainers from NGOs were also interviewed. In addition, all project field officers, administration/programme officers of the NGOs in visited areas, and project staff and ADAB senior staff were interviewed.

Findings

In general, the project had completed 100% of its targeted activities; tubewell installation, village sanitation centre establishment, workshops, seminars, training courses, and publications. The effectiveness of the project activities may be briefly reviewed as follows.

Appropriate low-cost technologies for water and sanitation

Water

Two hundred and ninety-two tubewells (15.9%) were installed in 1988 and the remaining 1527 tubewells were installed during 1989. According to the project records, the project provided access to tubewells for about 100 000 unserved and underserved people throughout the country. The cost of installation of each tubewell and construction of its platform was borne by the users of the tubewell. This was about US\$20 per tubewell, which is about 15-40% of its actual cost depending on its required depth.

Sanitation

Of the 192 families using project tubewells, only 19 (10%) were found owning some kind of sanitary latrine. About 30% of these were project/government-sold pit latrines and the remaining 70% were locally made, hygienic pit latrines.

The project identified and helped 40 NGOs to build their own sanitation centres. It was reported that the NGOs had sold 8838 sanitary latrines. This indicates that the NGOs were given monetary support to build 4000 sanitary latrines and they had revolved their funds about 2.2 times.

Multi-agency collaboration

Of the 295 partner NGOs of ADAB engaged in health programmes, 79% collaborated in this project; 100% of them (partners) participated in the water programme and 52% participated in the sanitation programme. Widespread contacts in all administrative divisions of the country were made within two years and with no field cost, except supervisory, to the project.

Officers of the visited local DPHE and the UNICEF offices were found to be well conversant on the activities of the project. They had participated in the training programmes and confirmed complementary associations between programmes by them and the project with no duplication.

Raising community consciousness and community participation

Training of NGO workers

As many as 335 fieldworkers were trained from different NGO partners. Since there was no specific instruction to NGOs about whom to send for training, more than 80% of the trainees were male, whereas in the field, the majority of fieldworkers were female. During the training courses hygiene practices were not discussed (Table 1).

The communications materials were general in nature, and covered too many topics. The same leaflets/posters were used to explain WSS issues to the common people as to the trainees (NGO workers). When the trainees and the community women were asked to explain two drawings from

Table 1. Training methods compared to practised status (n = 42)

Methods/Materials used during training	Used/Promoted in the community
1. Communications materials	%
Handouts	50
Posters	61
Flip charts	70
2. Knowledge on:	
a. Tubewell installation	100
b. Alternative options of latrine type	89
3. Practised promotion on use of:	
Tubewell use for all purposes	100

the leaflets used, all of them failed to explain the leaflet adequately.

Use of WSS provisions and its related knowledge

Ninety per cent of the interviewed women reported the use of a tubewell for drinking purposes. About 60% of them were using it for cooking purposes and less than 10% for bathing.

About 90% of the interviewed families used un-sanitary latrines. They reported that they had built indigenous sanitary latrines (hygiene latrines) before tubewell installation but did not rebuild them because they filled up too quickly on use.

At community levels, 100% of the 195 interviewed women stated some link between good health and drinking tubewell water. The majority (55%) of them stated a need for sanitary latrines to keep their environment clean. This level of awareness is higher than the national statistics. They rarely mentioned the need for sanitary disposal of faeces of their children or for washing of hands as an important practice.

Community participation

Male users were found to have participated in the site selection process of each of the visited tubewells. Female users had participated in the site selection of 5 of the visited sites (15%) and reported their feelings of pride as the community recognized their role in the installation. In sites where women did not participate, they denied being asked by their NGO workers to do so.

Ten per cent of the tested 32 women caretakers could perform the suggested maintenance properly. All of these caretakers belonged to a specific NGO (Bachte Shikha) which had provided maintenance tools to their female caretakers at their (NGO) cost. The WSS project did not have any provision for supplying tools to the caretakers. The majority of the remaining (68%) trained female caretakers mentioned that they could not do the maintenance because they did not have the tools. They depended on male users who did the maintenance by using some indigenous tool, borrowing the tools from other people, or hiring a machine. Although every pump was used by more than 5 families, all caretakers complained about the reluctance and delay of the users in sharing the maintenance cost. As the tubewells were installed at or near the caretaker's courtyard they often bore the required cost themselves. Adequate plans and guidelines for community cost sharing of tubewell maintenance was missing.

Discussion

This project has demonstrated two paradoxical messages: i) the multi-agency or partnership approach has the potential to provide hand-pump and latrine technologies to a widespread unserved/underserved population in an efficient way, and ii) it is difficult to achieve effective and sustainable use of the WSS provisions. Health benefits have been shown in projects/programmes where access to WSS technologies ('hardware') and their effective use ('software') were high. This combination of 'hardware' and 'software' can be realized (not to undermine literacy, poverty alleviation and other social welfare programmes) through community participation.⁷ It is recognized that the principal challenges of this decade will be the 'software' issues: how can people be trained, organized, and motivated to use and maintain the facilities?⁸ How can personal and family hygiene practices be improved and monitored?⁸⁻⁹ What is the most efficient way to identify the barriers and work for and with appropriate measures to make the community conscious of the needs and benefits?⁹ NGOs have proven abilities in community-based programming and it is easier for NGOs to test innovative strategies.¹⁰

The project lacked community, especially women's, participation in its planning, installation and maintenance activities. Women's participation in site selection and construction of WSS facilities has implications for effective use of the facilities and women's empowerment.¹⁰ A water sanitation research project in rural Bangladesh has reported satisfactory performance by rural women in decision as well as construction and maintenance activities of WSS provisions.¹¹ The efficiency of local women as handpump caretakers has been proven by the activities of a specific NGO partner in this project. The project should consider distributing tools to the caretakers and design their pump caretaker training appropriately.¹¹ Cost sharing of tubewell maintenance by users has also been reported¹² and a leader could be identified from, and with, the users to coordinate the required maintenance activities.

The project succeeded in identifying and installing the 40 targeted Sanitation Centres and revolving the funds. This shows the potential for developing sound, self-sustaining financial practices in this sector. However, under the given conditions the project may soon experience difficulties in identifying other NGOs capable of installing/running such Sanitation Centres, since the money provided to the NGOs was limited to buying components for constructing 100 latrines. Most of the other NGOs did not have the money to arrange the required space to house the Sanitation Centre, store the produced components and/or to make provision for a security system for the produced or procured materials. Furthermore, all of the NGOs which participated in the Sanitation Centre used an instalment payment system to recover the cost of latrines; the majority of people cannot afford to buy the latrines with one payment. Most of the other NGOs did not have similar institutional infrastructure to undertake latrine construction and/or support a similar cost-recovery mechanism. Therefore, it is important that adequate monetary support and money recovery plans/systems are designed if the project wishes to involve all NGOs in this activity.

The sanitation programme was also hindered by the variation in costs of the latrines. The government sells latrines at about 60% of actual cost, whereas the NGOs have to sell them at ac-

tual cost. This issue of standardization of costs and rules needs immediate attention to accelerate sanitation coverage.¹³

Hardly any monitoring of the use of installed latrines was done by any NGO or the project. Many of the families who had built latrines discontinued using them. Several follow-up visits to the sites could have provided moral support for the continued use of sanitary latrines and identified reasons for the discontinuity.

Many NGOs had clearly declined to participate in the sanitation programme yet they were taken as partners. This indicates a change in the original plan (which required that 50% of user families of project tubewells would build sanitary latrines) and less importance being given to the sanitation programme. Sanitary latrine use coverage of more than 68% has been reported in rural areas of Bangladesh where their use was given extensive motivational effort through schools and governmental workers as partners.¹⁴ The project should strengthen the NGO partners' motivation for sanitation.

The training component, in general, should be improved. Appropriate training techniques and communication aids should be developed separately and appropriately for various groups of people because trainees are literate and the targeted community people are mostly illiterate. Training of more female trainees/workers should be encouraged to increase women's participation.

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