

202.5 97WA

Library

IRC International Water
and Sanitation Centre
Tel.: +31 70 30 689 80
Fax: +31 70 35 899 64

[WaterAid : evaluation summaries]

202.5-97WA-1500

Evaluation Summaries

Introduction

The assumption that access to improved water supplies would lead to substantial health improvements was the impetus behind the 1981-1990 International Drinking Water Supply and Sanitation Decade¹. WaterAid aims to work through partner organisations to help poor people in developing countries achieve sustainable improvements in their quality of life by improved domestic water supply, sanitation and associated hygiene practices.

Over the past sixteen years, WaterAid and its partners have been working together to develop pragmatic approaches to integrating these three components in community-managed water, hygiene and sanitation projects. More recently, the need for more attention to community participation and to partner capacity-building have prompted WaterAid to include these two extra components into the integrated approach of Country Programmes.

WaterAid has been carrying out evaluations of its Country programmes throughout its operations. Since 1993 evaluations have put more emphasis on community participation and management, and have started to assess the levels of participation from conception to completion of projects. In 1996, WaterAid developed a Programme Management Policy which set out guidelines for the planning, monitoring, review and evaluation of Country and Partner programmes and projects.

Evaluation methodology

In response to the changes in the management of WaterAid's overseas programmes (see Table 1 overleaf), the purpose and scope of evaluations over the years have changed. Earlier evaluations focused on whether objectives had been met, while later ones looked both at objectives and were also a process of learning or an opportunity to improve the skills and capacity of WaterAid staff, partners and communities through their participation in the process.

Almost all the evaluations had national and international team members. The trend seems to be towards using specialists from the region or country rather than UK-based experts. Only one of the evaluations was donor-led (Uganda 1992) with the whole team being entirely expatriate. All other evaluations were managed by WaterAid.

The terms of reference for evaluations used to be drawn up by WaterAid UK or by the consultants, with little field inputs. Currently, all terms of reference are drawn up in a process of consultation between the Programme Management and Evaluations Advisor, Regional manager, Country Representative, partner executive, managers and field staff. This ensures that areas of concern to all stakeholders are covered by the evaluation team.

¹ Judy White: Evaluation Report EV:596, May 1997 - Rural water and Sanitation Projects

Table 1. THE HISTORY OF EVALUATIONS AND WATERAID

	EVALUATION	OVERSEAS DEPT STAFF CHANGES	WATERAID MANAGEMENT OF EVALUATIONS
1988		Country programmes supported by voluntary UK-based advisers.	<i>David Collet proposes independent interim evaluation of projects be carried out.</i>
1989	Sierra Leone		<i>Director initiates evaluations on ad-hoc basis</i>
1990	Nepal		
1991	Kenya		<i>Evaluation programme reviewed and evaluations of Ghana & Tanzania proposed</i>
1992	Uganda (Busoga)	Regional Manager East Africa position created	
1993	Ghana		<i>Evaluation Group formed to manage independent evaluations. (Head of Overseas manages internal monitoring and evaluations)</i>
1994		Regional Manager West Africa position created	
1995	Tanzania		
	South India	Regional Manager Asia position created	
1996	Ethiopia (Hetosa)		<i>Evaluation Group disbanded and Overseas Committee takes responsibility for evaluation programme</i>
	Uganda (Kabarole)	Programme Management & Evaluation Adviser position created	<i>PMEA co-ordinates evaluations</i>
1997	Nepal	Hygiene Education Adviser position created	<i>Programme Management Policy formulated to define purpose and scope of evaluations</i>
	Zambia		
	Ethiopia (Adwa & North Gondar)		
1998	Bangladesh (VERC projects)		
1998/9	Ghana Tanzania Mozambique		

Participation in evaluations has been carried out at different levels. At one end of the spectrum, participation has meant separate consultation with partner staff, heads of village water committees, government ministries and departments and field staff. In these cases, most analysis and synthesis is done by the evaluation team after discussions with these different stakeholders. At the other end of the spectrum, participatory evaluations have been brought together all the stakeholders (ministry staff to field staff) to work with community members to analyse and evaluate the project performance and its effect and impact on community members. Analysis is carried out in the community and final conclusions agreed by all stakeholders.

The coverage of evaluations has varied. Earlier evaluations attempted to examine all aspects of the Country Programme, whereas more recent ones have taken a thematic approach, and focused on specific areas that needed improvement or detailed analysis. In some countries, samples of partners have served to give a picture of the situation (South India). In other evaluations, the work of one partner has been evaluated (Hitosa).

The following collection of summaries of evaluations provides a historical record of how WaterAid's process of evaluation has changed over the years. Each evaluation summary is divided into the following sections:

- Evaluation Methodology
- Process and Progress
- Water and Technology
- Sanitation
- Hygiene Education
- Capacity-Building of Partners
- Organisational Links and Capacity-Building
- Community Management
- Programme Management

Not all evaluations cover the topics in the same degree of detail, so certain sections in some evaluations will appear rather thin compared to other sections. For example, the Terms of Reference for the Nepal 1997 evaluation focused more on organisational strengthening. This was because WaterAid Nepal and NEWAH needed to develop a strategy for WaterAid to gradually decrease its involvement and funding while building the capacity of NEWAH to become an independent organisation.

Full copies of each of these evaluation reports can be obtained from WaterAid UK.

CONTENTS

Uganda (Busoga) 1992

Ghana 1993

South India 1995

Tanzania 1995

Ethiopia (Hetosa) 1996

Uganda (Kabarole) 1996

Nepal 1997

UGANDA (BUSOGA) 1992 PROJECT EVALUATION

The following summarises findings of an evaluation conducted by independent consultants of work undertaken in Uganda by WaterAid in 1989-1992

- **Evaluations Methodology**
- **Process and Progress**
- **Water and Technology**
- **Sanitation**
- **Hygiene Education**
- **Organisational Links and Capacity-Building of Partners**
- **Community Management**
- **Programme Management**

For more details, please contact WaterAid

Programme Management and Evaluation Adviser

Facsimile: +44-171-793-4545
Telephone: +44-171-793-4500
Prince Consort House
27-29 Albert Embankment
London SE1 7UB
United Kingdom

Evaluation Methodology

With the support of the Evaluation Department of the Overseas Development Administration (ODA), the Ugandan Government's Directorate of Water Development (DWD), WaterAid in London and Kampala and the British High Commission Kampala, an evaluation of WaterAid's work was undertaken by Ben Fawcett (Environmental Health Engineering Consultant), Liz Juppenlatz (Social Development Consultant) and Judy White (ex-ODA Senior Economic Advisor and Team Leader).

In addition to undertaking extensive desk study of relevant research, the evaluators consulted with individuals and organisations involved with the project, both in London and in the field. The aim of the field visits was to (i) assess the state of the rehabilitated boreholes and their use by local communities; (ii) determine how well the community-based maintenance system was operating and (iii) identify the extent to which improved latrines have been taken-up while recognising changes in hygienic behaviour as a result of the project.

The evaluations team inspected all 215 boreholes rehabilitated by WaterAid in Kumali and Jinja Districts to assess their condition and use. Semi-structured interviews and discussions were held with Borehole Users' Committees (BUCs), caretakers, and handpump mechanics (HPMs), all key components of the programme, in order to assess how well Village Level Operation and Maintenance (VLOM) was working in practice. Women at waterpoints were consulted in an effort to quantify potential project benefits (time savings and increased quantities of water collected) and to gain an overview of households' dependence on the boreholes in the project area. Detailed information on the impact of the borehole rehabilitation programme in two villages was collected using participatory techniques.

Separate sample surveys were conducted to identify the take-up of improved latrines and improved hygiene behaviour in the project area in order to establish whether there were significant differences between areas subsequently targeted by DANIDA's Ruwasa project and those which were only targeted by WaterAid. The exercise was carried out by observation and through interviews at the household level.

Following circulation of a draft report to those most closely concerned with the project, the ODA's Projects and Evaluation Committee came together with the Overseas Department and the lead evaluator to discuss and agree the main conclusions and lessons to be learnt from the study on the basis of the draft report. The current synthesis summarises the final evaluation report of the Uganda programme which emerged from this thorough process.

Process and Progress

WaterAid had been operating in Uganda since 1984 in partnership with local churches and schools, rehabilitating water and sanitation systems prior to the Borehole Rehabilitation Project launched in 1989. Its main activities were in Eastern Uganda's Busoga Region in partnership with the Busoga Diocese, a local church-funded NGO based in Jinja. With the extension of its operations to other parts of Uganda, WaterAid moved its headquarters to Kampala in the early nineties.

The more recent Borehole Rehabilitation Project aimed to provide selected communities in the three districts of Eastern Uganda, namely Jinja, Kumali and Iganga, with access to a clean, reliable and sustainable domestic water supply. The chosen strategy looked to rehabilitate 120 boreholes, equip these with handpumps suitable for a Village Level Operation and Maintenance system (VLOM) and set up the community element of the new Handpump Operations and Maintenance (O&M) system. The project also planned to support health education and improved sanitation in the same communities in order to reinforce the potential health benefits from improved rural water supplies.

The project was initiated and implemented by WaterAid with a £236,000 contribution from the ODA primarily intended for the purchase and operation of a service rig and truck, and for a project

manager to supervise the service rig-team's work and coordinate other elements of the work with relevant government departments. UNICEF supplied pumps and spares to the project to the value of £44,000. DANIDA's resources were subsequently tapped by the project, particularly for training facilities, and local government staff from Busoga Region undertook many of the project activities.

The project was low-cost but not cost-effective. Some 234 boreholes were rehabilitated over the period June 1989 to June 1992, almost doubling the originally set target of 120. At the same time, WaterAid was largely unsuccessful in achieving its other aims. It did not establish a sustainable community-based O&M system and about one-third of the rehabilitated boreholes are no longer in use. When WaterAid wound up the project, its work had only just started in Iganga District.

In a significant number of cases, the rehabilitated borehole was not the communities' preferred water source and has since been abandoned. In other cases, borehole yields are now lower than planned because of corrosion of riser pipes or, less frequently, because of siltation. In no more than one-third of cases was borehole rehabilitation (using GI pipes) likely to have been the most cost-effective solution. Alternative water sources which existed in parts of the project area could also have been improved at low cost. Additionally, no impact was made on hygiene and sanitation practices in the target communities though health benefits are likely to have been minimal.

When the project was wound up there was a balance of some £79,000 of project funds remaining. The decision to terminate the project was taken in the light of the activities of Ruwasa which moved out of its pilot phase at the end of 1991 and got fully underway. Outstanding project funds were transferred to another WaterAid/ODA project in Uganda.

Water and Technology

In the southern half of the project area, the land is fertile, well-watered and densely populated, especially in Jinja District where rural population density averages 428 per sq. km. The rural population in the southern half of the project area generally has a choice of water sources for domestic use, from streams, springs, shallow wells and boreholes. In the peri-urban areas and some trading centres there is piped water and a system of water kiosks. Water is generally 1-1.5 km from the southern Districts. In the northern half of the project area both rainfall and population density are lower, averaging 146 per sq km in Kamuli District, with density dropping from South to North of the District. Here, some people must travel long distances from home to access water. While WaterAid's aim was to respond to this situation, the project design was engineering-led rather than defined from social or economic premises. Implemented from 1989 to 1992, it focused on borehole rehabilitation, with sanitation and hygiene education components appended.

The choice of handpump was in line with national policy to standardise the use of U2 and U3 pumps. All the pumps which were installed by the project were imported from India by UNICEF. Some of the pumps incorporated galvanised steel pipes which are easily corroded by the "aggressive" water found in the area. This has greatly increased the maintenance burden, complicated the question of sustainability, and reduced the project's cost-effectiveness. If WaterAid had undertaken an initial technical survey to investigate the reasons for borehole failure, it is likely that the problem of aggressive water would have been identified. These findings raise a question mark over the sustainability of WaterAid's chosen technology for improving water supplies in Busoga Region as the costs of maintenance might prove too high for some communities to afford.

At the same time as the project was being established, a local company, Victoria Pumps, was setting up facilities to sell U2 and U3 pumps, made partly from locally manufactured parts. These pumps were 80-100 percent more costly than pumps imported by UNICEF, precluding the UN agency from purchasing from the local company by its own regulations. UNICEF was not able to purchase pumps locally until 1994 after it has been agreed that costs should be calculated on an economic and not a financial basis. It remains unfortunate that the project was unable to foster the early development of

Victoria Pumps as local suppliers play an essential role in ensuring the sustainability of domestic water supplies.

During the initial stages of the project, there was no consideration of other low cost options in the project area such as spring or shallow well improvements which have the added advantage of lower O&M costs. WaterAid was already undertaking some spring and shallow well improvement in the area under separate programmes. Borehole rehabilitation was thus considered a separate project and therefore, by definition, the technology was determined at the outset.

Many of the rehabilitated boreholes are inconveniently sited for users, reducing potential time savings from the project. Where boreholes *are* conveniently sited, women are collecting increased quantities of clean water, primarily in Kamuli District, and benefiting from time savings and decreased workloads. Time savings from the project have also been reduced by the drilling of new boreholes by Ruwasa in the project area. The in-depth survey in Kagera found that women used time saved to work in the fields, mainly on subsistence agriculture.

One unanticipated effect of the Borehole Rehabilitation Project appears to be a small increase in kitchen gardening and poultry-keeping, which are traditionally women's activities. In addition, the poorest members of the community seem usually not to be denied access to water when unable to contribute to the O&M costs. As many of the busy handpumps are located near or in trading centres, traders have rapidly financed repairs in order to maintain the water supply on the understanding that they will eventually be reimbursed by the community.

In total, 61 percent of the boreholes rehabilitated by WaterAid in Jinja and Kumali are functioning satisfactorily. If, however, those with pumps that were subsequently replaced or repaired by Ruwasa are excluded, only 36 percent were still in regular and satisfactory use in May 1995. It is not clear what WaterAid's intended or actual value-added in the borehole rehabilitation project was, given the vast resources made available by DANIDA to rural water and sanitation activities in the same area. Still, the decision to speed up the borehole rehabilitation component of the programme was at the expense of the social mobilisation component.

Recommendations

Towards ensuring that appropriate and sustainable technologies are used, it is recommended that:

- WaterAid consider the overall appropriateness and feasibility of different technologies rather than have the technology determined from the outset; and
- in choosing appropriate handpumps, WaterAid consider the often conflicting factors of standardisation, technical suitability, ease of maintenance and capital cost.

Sanitation

WaterAid aimed to promote sanitation through demonstration of improved pit latrines (VIPs) in 120 communities. The available budget was £10,000 per annum for demonstration materials and £12,000 per annum for transport and field expenses of government health workers. The choice of technology appears to have been driven by the desire for technological excellence, with little acknowledgement of the importance of demand and affordability for take-up of the technology on offer. As a result, the project was destined to fall a long way from its obscure targets.

The known difficulty of obtaining requisite materials for the building and maintenance of VIPs was a weak point in the initial design of the sanitation component of the project. The location of VIPs was poorly calculated as primary schools and community centres were targeted for demonstration. This strategy has generally been ineffective in generating interest in self-constructed latrines in individual homes. It was eventually dropped in favour of simple pit latrines on the grounds of their affordability and greater ease of construction.

Given the relatively small amounts of water being abstracted, the water table does not appear to have been affected by continued abstraction from the rehabilitated boreholes. Attempts to ensure that the water drains into soakpits from the handpump surroundings have been generally successful, so that the areas around the pumps are kept clean and reasonably dry and do not encourage insect breeding. Although most of the pump surroundings are not fenced, animals do not appear to be brought for watering at the pumps, which would result in mud and soiling. In some cases wastewater is being used for puddling clay, which does not, on the whole, interfere with the area's cleanliness.

Health Assistants (HAs) were responsible for the promotion of sanitation and the construction of latrines. WaterAid reported on their performance in March 1991, acknowledging that this was being carried out in "an unstructured way" with some HAs "more active than others."

WaterAid has helped set up a small, highly subsidised sanplat production unit in one Jinja District village. Three years later, Ruwasa was still underpinning the operation as no private sector distribution network had developed (effective demand for sanplats is not yet high enough to make production commercially viable). Ruwasa was expected to remove its subsidy at the end of 1995 recognising that sanplat production at the Kamira casting yard would cease. Ruwasa's activities have had a considerable impact on latrine coverage but have not had a corresponding impact on actual latrine usage.

Women were found to be well aware of better sanitation practices, but even when motivated to take practical action are often constrained by cultural conventions. These prevent pit latrines from being built by women. Most men are indifferent to the notion of building latrines and thus the problem goes unresolved, often considered merely another "domestic" issue.

Based on evaluators' surveys conducted in four villages in different sub-counties of Jinja District to assess latrine coverage, condition of latrines and sanplat ownership, it was estimated that average coverage was 74 percent while sanplat ownership varied from an average of 25 percent in two villages to an average of only 5 percent in two others. It was mainly well-off middle income households that could afford to buy sanplats.

Overall, WaterAid assigned a much lower priority to the sanitation component than to borehole rehabilitation despite lessons that were filtering through from water and sanitation projects elsewhere: as water supplies alone are an insufficient means to promote health benefits it is necessary to emphasise the interdependence of the components. While WaterAid acknowledged in the first few months of project implementation that it was unable to devote as much time and attention to the sanitation component as it wished, too little attention was paid to it throughout the project's lifetime. It remained a minor activity carried out in an ad hoc manner.

Recommendations

Towards improving WaterAid's response to sanitation issues in Uganda, it is recommended that:

- a review of institutional capacity and capability of local partners involved in this type of project should be standard appraisal procedure;
- affordable latrine technology be developed and proposed to households; and
- latrines should be located in public places, such as dispensaries, primary health care clinics and markets for people to see and use.

Hygiene Education

The hygiene education component of the programme, budgeted at £12,000 per annum, was poorly planned and informed from the outset. During project appraisal, no information on the average consumption of water or of the prevalence of water-washed diseases was available. There is no mention of the approach and methodology that would be adopted for hygiene education. Neither WaterAid nor Ruwasa carried out any assessment of institutional capacities or existing skills of local

government staff in hygiene education before or during implementation.

When the WaterAid project started, DANIDA was preparing to carry out pilot projects in two Districts (Kamuli and Mukono) to test its social mobilisation approach. WaterAid then adapted its own mobilisation proposals to the “more formalised” Ruwasa plan, and generally subsumed its own activities within those of DANIDA.

The project sought to promote discussion of health issues by using the service rig used in borehole rehabilitation to draw crowds and treat captive audiences to a showing of UNICEF posters. This was not very effective, as the HAs explain, because villagers tend to be far more interested in watching work being done on boreholes than in paying attention to poster-assisted presentations.

WaterAid experimented with showing films and working through schools as a strategy of hygiene education. One film in English was shown to Handpump Mechanics (HPMs), who were reportedly very enthusiastic. Plans to show it in villages with simultaneous translation in local languages seem to have fallen when the project broke down. Nothing seems to have come of the idea of working through schools, an option which was never mentioned again in waterAid’s monitoring reports.

After these early experiments, WaterAid relied exclusively on the HAs and Community Development Assistants (CDAs) to undertake the hygiene education work, with no project supervision. The project’s contribution was therefore largely financial, providing two motorcycles for Assistant District Health Educators (ADHE) and paying field and transport allowances to those local health workers involved in hygiene education work.

WaterAid’s activities in hygiene education were extremely limited and proxy health indicators, e.g. increased water usage and improved hygiene practices, do not suggest that there have been appreciable health benefits arising from the project. Though there is a high level of awareness of good hygiene education in the villages surveyed, actual practice does not reflect this. In spite of Ruwasa’s substantial efforts to improve communities’ hygiene education, these too have had very limited impact.

Recommendations

Towards designing effective responses to health and hygiene practices in Uganda, it is recommended that:

- a KAP (Knowledge, Attitudes and Practices) survey on existing hygiene practices is appropriate during the design stage of projects;
- WaterAid commit substantial resources, both in time and staff, to future health and hygiene education projects; and
- teams of HAs organise hygiene campaigns and intensive household visits before work is started on borehole rehabilitation, with subsequent follow-up.

Organisational Links and Capacity-Building

There were few external organisational links in the context of WaterAid’s efforts in Uganda. The programme was however monitored by the British Development Division, East Africa – ODA, Kenya --Engineering Adviser (BDDEA) who visited at regular intervals. WaterAid also sent progress reports to the BDDEA every six months. In addition, the project was reviewed by the Social Development Adviser as part of a wider review of NGO projects in Uganda.

Though one of WaterAid’s general aims is to facilitate local capacity-building processes, the programme failed to analyse the institutional skills and capacity of its local partner, the Government of Uganda and its BMU in particular. Having neglected to undertake this assessment, WaterAid was only able to undertake capacity-building and training initiatives after the project was underway, ushering in delays during implementation.

In the mid-1980s, the new NRM Government of Uganda, supported by UNICEF, initiated an Emergency Programme of borehole and handpump rehabilitation in Luwero District. Because centralised repair and maintenance of public boreholes had all but collapsed, the Emergency Programme experimented with community-based maintenance systems under which the local community served would be responsible for all but the most major repairs to handpumps and boreholes. In the early 1990s, the Government developed a national strategy for rural water supplies in which community-based maintenance systems were to play a pivotal role. WaterAid's efforts fit into the context of this national strategy.

The programme was originally conceived in 1985 as a small stand-alone project which WaterAid eventually fit into the Ruwasa project of DANIDA. In rehabilitating boreholes, WaterAid chose to work through local government, specifically the Government's Borehole Maintenance Unit (BMU), rather than more directly with the communities through local partners. The BMU was meant to provide "experienced" crew members to operate the rig and back-up vehicle to carry out the rehabilitation of boreholes. The only mention of work with local communities in this context was to the effect that "*they will be expected to supply locally available sand and aggregate.*" The project was implemented in close cooperation with the WDD – Water Development Department, Uganda -- (now retitled the Directorate of Water Development) which was responsible for borehole maintenance. Its activities were coordinated with those of the local Departments of Health and Community Development whose staff undertook social mobilisation and hygiene education activities.

The project seriously underestimated the effort required to make the overall system work effectively. It was assumed at appraisal that those responsible for social mobilisation and hygiene education only needed funds for their work in the field whereas they often had to be trained to undertake project-related tasks more efficiently.

Recommendations

Towards facilitating processes aimed at building sustainable capacity of local partners, it is recommended that:

- WaterAid continue providing support to capacity-building initiatives after completion of the physical work.

Community Management

The project aimed to facilitate the introduction of a Village Level Operation and Maintenance scheme (VLOM) to replace the centralised system of borehole maintenance which operated in the past. With U2 pumps replacing U1 pumps, the maintenance of pumps could be easily undertaken by a local pump mechanic assisted by village-labour, without the use of standard lifting gear. WaterAid proposed to follow the same VLOM system as that being promoted by UNICEF under its Emergency Programme, based on the principle of "investing maximum responsibility to each community served by an individual pump." This was set within the framework of a three-tier system of handpump maintenance comprising:

- a pump caretaker for regular, daily or weekly maintenance, answerable to a village or water point committee;
- a mechanic trained in handpump maintenance and repair and supplied with a toolkit, responsible for all repairs on several pumps in a sub-county; and
- the existing government financed BMU under the WDD, for major repairs or rehabilitation of boreholes.

Communities would be responsible for the appointment of caretakers and handpump mechanics, also providing them with remuneration, where appropriate.

No formal training was given to caretakers in the first two years of the project after which WaterAid relied heavily on Ruwasa's resources for training activities. The BMU staff were expected to involve the caretakers in their rehabilitation work, especially in handpump installation, and to brief them on their duties. This practice was recognised as inadequate and a one-day training course was instituted in October 1991 for mixed groups of caretakers and Water Users' Committee (WUC) chairmen from some eight boreholes per course. This offered an introduction to community-based maintenance, the role of the caretaker, preventative handpump maintenance, practical basic maintenance skills and an introduction to water, sanitation, hygiene and health, Health Inspection and Health Education Departments, and were necessarily brief and rapid. Over the last eight months of the project, caretakers were trained in this way for 87 boreholes.

The HPMs received theoretical training under the Ruwasa project and then six weeks practical training with the BMU in the field. Technical training received by HPMs and caretakers included techniques for the air-lifting of silt and other blockages, fishing for pipes and pumps dropped into the hole, bailing out silt and other materials and using a surge plunger to clear well-screens. Some trainees were sponsored by WaterAid in the form of allowances for attending the course and meeting the costs of their food and accommodation.

HPMs, who were trained in a joint programme with Ruwasa, are competent to carry out their maintenance tasks but the system within which they operate is very weak. The distribution of pump spare parts is still poor. At the time of the evaluation, the Government's Borehole Maintenance Unit (BMU) had not as yet been called upon to carry out major repairs.

WaterAid organised a three-day briefing workshop for HAs and CDAs. This was an introductory course as the CDAs and HAs were expected to receive more substantive training under the Ruwasa project. Two masons and one HA trained in the production of sanplats and latrine slabs were trained by WaterAid, using government staff who had been trained by Ruwasa. This was followed by an informal session conducted by WaterAid and on-the-job training in the village. The training conducted for sanplat production included one female mason and the masons were selected by the villagers. As a result of this, and perhaps more directly Ruwasa's intervention, other women's groups were encouraged to take this up as well.

One of the conditions of setting up Borehole Users Committee (BUCs) was that they should have equal gender representation. The handpump caretakers for each borehole were intended to be a man and a woman. Project monitoring was not used as an opportunity to see whether this was being achieved though all handpump mechanics were evidently men. WaterAid's attempts in meetings at sub-county level to encourage the selection of some women as HPMs invariably met with strong resistance and none was selected by a BUC.

Willingness to pay for water exists in the project area but not at a high enough level to cover long-term borehole O&M costs. This is particularly acute where a significant number of rehabilitated boreholes have proved not to have been the communities' preferred source. In places where there is water vending, willingness to pay is higher for daily purchases of water than for one-off contributions for O&M costs of boreholes. The majority of WUCs have been able to collect funds, when necessary, for repairs, which the mechanic has then carried out competently. However, committees have experienced difficulties in collecting funds regularly for maintenance and only a small number are able to maintain a balance in their accounts. The corollary to this is that little preventative maintenance is carried out on the pumps.

There is therefore a question mark over the ability of villagers, in the longer term, to maintain the boreholes in regular use. These doubts threaten the project's sustainability. This is emphasised as a concern given that it was not made explicit at appraisal how WaterAid intended to fund the borehole

rehabilitation work after the initial two years of work, if at all, or if it would transfer full responsibility to the Water Development Directorate (WDD).

Women were not found to be well represented on WUCs with the result that they are regarded as token members who often do not turn up at meetings or undertake committee tasks. An informal "division of labour" often takes place at boreholes where there is both a male and a female caretaker, the former taking responsibility for maintenance tasks and women being held responsible for hygiene education messages.

When WaterAid ceased supporting the BMU programme, the development of the three-tiered village level operation and maintenance system (VLOM) was still at an early stage. There was very little sense of ownership over the project, which is partly because WaterAid did not formally commission and hand over Operation and Maintenance (O&M) responsibility to the community for the rehabilitated boreholes. Borehole Users Committees (BUCs) continue to exist for boreholes still in use, but are operating at various levels of efficiency. The village handpump caretakers have only an inadequate understanding of their duties and handpumps are not being given routine maintenance, repaired only when they break down.

Recommendations

Towards long-term community management of projects, it is recommended that:

- men and women are trained to share tasks rather than divide them up along gender lines; and
- particular care be taken in assuring that physical work does not outstrip the pace at which social mobilisation can be achieved.
- to ensure the sustainable VLOM management of an improved water source, WaterAid assure a transfer of ownership through publicly acknowledged, formalised mechanisms.

Programme Management

WaterAid's main task was the supervision of the work of the BMU. This was made explicit at appraisal and subsequently in the project supervisor's TOR. The WaterAid Project Supervisor, a geologist who joined the project in June 1990 was active in supervising the rehabilitation work, although day-to-day control was exercised by the experienced Borehole Maintenance Supervisor (BMS) field driller. The Project Supervisor was responsible for deciding overall strategy, for the project's coordination with Ruwasa and UNICEF, for procurement of supplies and for supervision of the sanitation and health education work.

The project paid field allowances to the WDD staff assigned to the BMU to operate the rig and back-up vehicle and provided tools and spares for the rig. The WDD made available the workshop site at Bugembe, just outside Jinja, for servicing the rig and repairing the pumps.

There was confusion at appraisal between the purpose of the project (implicitly the provision of clean and convenient water, improved hygiene awareness and greater use of improved sanitation facilities) and the specific output of borehole rehabilitation, which in practice drove the project. This confusion prevented the proper assessment of local needs, technical alternatives or justification for borehole rehabilitation over other possible options. There is no evidence in the appraisal document that there had been any consultations with the local communities to seek their views on the use that would be made of the rehabilitated boreholes or to ascertain their preferred water sources. There was no analysis at appraisal of the economic viability of rehabilitating all the boreholes. There could therefore be no formulation of good performance indicators, making monitoring more difficult. Monitoring of the project was thus limited to six monthly reports which covered numbers of borehole rehabilitation, monitoring of expenditures and evolution of the VLOM process. Additionally, while ODA monitoring of the project was regular, it lacked a desirable multidisciplinary dimension.

WaterAid knew before project implementation got under way that a major donor-funded rural water and sanitation project was imminent in the same region but chose to go ahead with its project rather than transfer to another area. As the project was implemented, its exit strategy evolved over time. It was wound up with significant funds in hand with activities transferred to another major donor and with borehole rehabilitation just started in the third District of its project area. The activities of a very large rural water and sanitation project (Ruwasa) overlying the WaterAid project area has influenced the project's outcome and made it hard to separate out the influence of each donor.

A number of other issues are worth noting here. A major omission at appraisal was the lack of attention given to women's involvement in the project. Women are not mentioned at appraisal in any context though the opportunities provided by rural water supplies for improving socio-economic positions of women were already widely acknowledged at this time. Also, the project's environmental consequences were not mentioned at appraisal, probably because it was recognised that the project's environmental impact would be minimal.

There are some very large differences between the original budget for borehole rehabilitation work and actual project expenditure, such as those for materials (budget £25,000 per annum, actual yearly expenditure only £1,026) and for rig and vehicle operating costs (budget £5,000 per annum, actual yearly expenditure £10,235). These indicate that the original budget was based on insufficiently detailed cost analysis with some highly inaccurate estimates. There was also underspending of training costs but this was partly because Ruwasa covered some of these costs, a possibility which would not have been foreseen at the time the budget was drawn up.

Recommendations

Towards improving programme management by maximising resource efficiency, it is recommended that:

- WaterAid reflect upon, define and exploit its own comparative advantage when choosing to work alongside a major donor;
- WaterAid identify a focused baseline analysis of the situation of the variables providing itself a platform from which to monitor and evaluate;
- WaterAid examine pre-existing institutional skills and capacities where some of a project's activities are to be undertaken by local government;
- where a new system for O&M for rural water supply projects is being introduced, progress in achieving this is a vital monitoring target; and
- Project monitoring of rural water supply projects be undertaken by a multi-disciplinary team rather than by a single technical advisor.

GHANA 1993 PROJECT EVALUATION

The following summarises an evaluation carried out by independent consultants in January 1993 of work undertaken in Ghana by WaterAid

- **Evaluation Methodology**
- **Process and Progress**
- **Water and Technology**
- **Sanitation**
- **Health and Hygiene Education**
- **Capacity-Building of Partners**
- **Community Management**
- **Programme Management**

For more details, please contact WaterAid

Programme Management and Evaluation Adviser

Facsimile: +44-171-793-4545
Telephone: +44-171-793-4500
Prince Consort House
27-29 Albert Embankment
London SE1 7UB
United Kingdom

Evaluation Methodology

An evaluation of three WaterAid supported projects carried out by Non-Governmental Organisations (NGOs) was undertaken on 10-24 January 1993. An evaluation team which comprised B.M.U. Bennell (team leader), S. Abdulai, T.M. Spens and J.E. Thackray visited about 25 villages which have hand-dug wells constructed with WaterAid's guidance and funding.

After initial briefing and discussions in Accra, nine days were spent visiting the three different project areas. The evaluation team held discussions with the chairman and management committees and staff of the NGOs which WaterAid supports. After visiting the villages, the team returned to Accra for further meetings and round-up discussions.

Process and Progress

Though WaterAid's involvement in Ghana can be traced back to 1985, its programme work developed most significantly from 1988 onwards. By January 1993, WaterAid had actualised its strategy of establishing alliances with local organisations and community development initiatives, supporting three water-improvement projects carried out by local Non-Governmental Organisations (NGOs). A total of five NGOs have been involved in these projects in which at least 439 hand-dug wells were constructed and another 837 forecasted.

Partner NGOs demonstrated a great deal of commitment and enthusiasm during this phase of WaterAid's involvement in Ghana, making it possible for requests emanating from the grassroots for improved water supplies to become the subject of deliberation, forward planning, implementation and evaluation.

In creating strategic alliances with NGOs, WaterAid has been able to broaden its participation and scope for assistance in different regions of the country, providing supervision, equipment and cement to construct the wells, as well as expert labour as required. WaterAid's financial contribution to these projects, including training, has increased from £76,000 in 1988-89 to an estimated £507,000 for 1992-93. By early-1993, WaterAid employed about 71 Ghanaian staff at a cost of £74,000, roughly 16% of the total project allocation.

It should be noted that while this evaluation advances recommendations towards furthering programme development, the evaluators in many cases endorsed existing practices.

Water and Technology

Villages situated in the two Southern districts where WaterAid is involved tend to be sited on high ground adjacent to streams that are the principal sources of domestic water supply. In the dry season, the streams fail to replenish themselves leaving only stagnant pools from which water is collected. In these regions, water is carried an average 300m by women from source to use. In the Upper East Region, many rivers cease to discharge in the dry season. Here the distance which water must be carried, usually by women balancing 20kg-capacity bowls, is on average about five kilometres. In both cases, wells are desired and increasingly valued by the communities for their general health and well-being benefits.

The average depth of the hand-dug wells is about seven metres in the North East Region and in the Akuapem district, and fifteen metres in the Kwaho district. The wells are 1.5 metres in diameter, dug by hand, with no protection provided to prevent the walls from caving in during construction. When the excavation has reached the groundwater table, a concrete lining averaging 1 metre in width is cast in situ from the bottom upwards. This method is generally

considered unfavourable for wells deeper than four metres.

Project technical assistants carry out excavation below the water table. About four precast concrete perforated caissons 90cm diameter/60 cm deep are then emplaced surrounded by a layer of coarse sand. The well is then complete and covered by a pre-cast reinforced concrete slab, with two apertures: one for the handpump, and the other through which buckets can be hoisted. The design of the wellhead facilities, some of which include washing slabs and animal drinking troughs, has proven highly effective.

Once completed, wells in the two Southern districts are disinfected with a solution of sodium hyperchlorite. The wells of the North are not as yet being disinfected, nor is there a regular sampling programme underway in any of the districts. Tests carried out in January 1993 in the Upper Eastern Region revealed disturbing faecal colliform counts.

There are indications that in addition to making it far easier to draw water, hand-pumps help prevent contamination of the water which can result when using hand-drawn buckets. Even so, villagers decide whether to draw water by hand-rope and bucket or by means of a hand-pump. A relatively small percentage of villages have opted for hand-pumps apparently because the initial capital outlay required for their installation and maintenance is too high (though financial assistance is available to them).

The well construction project has generated valued spin-offs. In response to community requests, ACDECO and Rural Aid have secured funding from Africa 2000 Networks to facilitate the establishment of tree nurseries near completed wells. Akuapem Community Development Project (ACDEP) and Rural Aid took the necessary steps to promote community participation in the choice of tree species as reflected in the desire to meet food, income, fuel and environmental protection needs. There is also a clear agreement on the watering and protection of transplanted seedlings. In all cases arrangements were made for specialised extension advice from the Forestry Department.

Recommendations

Towards improving the delivery of water and associated technical services in Ghana, it is recommended that:

- alternative, safer methods of well construction be adopted;
- experts in the technical, logistic and hydrogeological aspects of the projects be consulted;
- a water quality chemist from a UK Water Authority demonstrate correct sampling and testing procedures and recommend possible improvements. The possibility of collaborating with the Ghana Water and Sewerage Corporation (GWSC) laboratory in Bolgatanga to improve their equipment where necessary might also be considered;
- WaterAid facilitate the provision of hand-pumps with improved health as its primary consideration; and
- water slabs should be provided to project communities if project managers are satisfied that they are wanted and will be used.

Sanitation

Planned sanitation is minimal throughout the communities of Ghana and 60 percent do not have access to potable drinking water. Mortality rates are high at 15 percent and there are correspondingly high levels of water-borne illness with attendant human suffering and loss of production.

Responding to the situation, WaterAid is supporting a programme of improved sanitation in the villages and is most involved in the Southern district of Akuapem. Houses there are generally clustered together and good sanitation is clearly desirable. WaterAid provides materials costing about £120 for communal latrines, comprising a four-hole slab and a vent pipe. The villagers who construct the superstructure and dig a 3m pit provide materials for the rest of the structure. As the country is infested with termites, the slab and superstructure are built with termite-resistant wood. To date, 64 such latrines have been constructed in the Akuapem district, of which 43 have no superstructure.

The situation in the Upper East Region is different in that each compound, which may house about 40 people, is widely separated from its neighbours. The countryside consists mostly of open grasslands. Defecation takes place in the bush and is often cleared up by the numerous herds of pigs.

Attempts to introduce Mozambique slabs have not so far been successful in Ghana. This is partly due to the soft clay soil, which makes it essential to line the pit with open concrete blocks to support the slab. The high cost makes this impracticable.

Recommendations

Towards increasing access to improved sanitation, it is recommended that:

- once demand for communal latrines is stimulated, it should be met in full at an agreed level, and that decisions be taken that budgetary provision should be made for this endorsement.

Health and Hygiene Education

This aspect of the programme, which started in 1989, accounts for about 16-18 percent of WaterAid's total programme budget. The project was developed in consultation with Ministry of Health staff in Accra. It also has close links with the Ministry of Education's Department of Non-Formal Education with the aim of making educational materials accessible in vernacular languages, thus contributing to the functional literacy campaign. At District level, especially in the South, day-to-day coordination appears good.

At all levels of project management and implementation there is strong conviction that health and hygiene education are necessary to maximise the benefits to be derived from the provision of safe water. This conviction, as well as the multi-sectoral nature of people and organisations involved in the project, has contributed to its success. Implementation of the established strategy is the responsibility of partner NGOs.

Each of the five collaborating NGOs involved has appointed a Health Education Supervisor, generally drawn from a pool of people who have worked as National Service personnel in the project area. Though with little or no previous professional health training experience, each attended annual training workshops organised by the Programme Assistant for Health Education based in the Accra office of WaterAid/Integrated Social Development Centre (ISODEC). Staff from various government departments assist with the trainings.

As a first step, a series of workshops and staff meetings was held in which project managers and well supervisors were encouraged to realise that water provision was also a health intervention. To support this training, a small illustrated Health Education Training Manual was prepared which provided basic education about relevant water-related diseases and preventive measures,

and promoted a participatory approach to health education. This early involvement of technical staff during the planning phase undoubtedly contributed to the close integration of health education within the overall programme.

By far, the main channel for health education within all project areas is through voluntary Village Health Coordinators (VHCs). VHCs are selected by community members, and their training and later supervision are a project responsibility. Originally, two VHCs were selected by each well community but this has now been increased to three on grounds that the women work more confidently if there are three.

Health Supervisors organise residential training sessions and identify appropriate trainers, themselves drawn from various Government ministries and departments. They also support, monitor and evaluate the impact of work performed by VHCs. The output of VHCs trained and numbers of booklets published for their use indicate WaterAid's commitment to this aspect of the programme. In the 1990-95, the total number of VHCs trained and projected to be trained stood at 3240. From 1992-95, an estimated 108,000 training booklets will have been published. It is anticipated that these materials will be translated into a number of local languages.

In the Upper East Region, VHCs appear to have had the most success in promoting the use of covers, and to a lesser extent dippers, for stored drinking water. In the South, one reported effect of their work has been the eradication of Guinea worm in all but five of the thirty targeted villages. There are general indicators suggesting that diarrhoea has been less prevalent since the installation of wells. In discussion with community members, the project evaluators (1993) felt that community understanding about the transmission and prevention of diseases, including malaria, bilharzia and diarrhoea seemed weak though improving gradually, while already having a real impact.

Over the last three years, substantial progress has been made in integrating safe water provision with health education. More water than previously is being fetched by at least some of the households. It would appear that the preference for well water is such that it was even being carried to farms. WaterAid/ISODEC now sees itself playing a supportive role in the provision of health education, mainly concerned with the production of training material, organisation of training for the trainers of VHCs and for Health Supervision, and monitoring and evaluation.

Recommendations

Towards expanding the reach and effectiveness of health and hygiene education in Ghana, it is recommended that:

- WaterAid subsidise commitment and maintenance fees of water-pumps for poor and deserving villages, especially those with a poor health record;
- reliance on VHCs as the main channel of health education be reviewed, encouraging NGO staff and others to be thinking about other direct and participatory methods of dealing with the communities and target groups within them;
- a senior staff member be appointed with the sole responsibility of developing and coordinating health education/community-participation, thus strengthening NGO programmes in health education ;
- each NGO should, if possible, have a microscope available to them, as well as other valuable visual aids; and
- consideration be given to the establishment of a Memorandum of Understanding with the Ministry of Health, and that liaison at national, regional and district levels should be further

consolidated.

The essence of the provision of safe drinking water and sanitation in rural areas in Ghana, is the decentralisation of government administration towards the new District Assemblies and NGOs, and a major change in the role of GWSC from that of service provider to that of 'enabler' in rural areas.

WaterAid has been heavily involved in this process by demonstrating in the field how water and sanitation NGOs can be formed or developed into effective local, district or regional organisations for the provision and management of rural water supply, sanitation, related health education, and training of present and future personnel. The five local NGOs that WaterAid is supporting are Rural Aid in Bolgatanga, Binaba Area Community Health (BACH), Akuapem Community Development Project (ACDEP) in Akropong, Obuama Rural Action (ORAP) in Mpraeso, and the Northern Evangelistic Association (NEA).

In addition, WaterAid has directly participated in high level meetings to disseminate the theoretical and practical experience gained through supporting its various field operations. WaterAid is also involved in the MOLE Annual Conferences which have been effective in both communicating technical 'know how' at an appropriate level from one organisation to others, and also in beginning to facilitate cooperation between the various government agencies and between private sector agencies and NGOs. The need to cooperate rather than compete has now been accepted at a variety of levels in the rural water, sanitation and health fields. WaterAid has been relatively successful in capturing and institutionalising this concept.

The possibility of developing a few projects was being discussed with a variety of different Ghanaian partners. The possibility of NGO participation in a pilot bilharzia eradication project combining improved water supply and education (NGO) and screening, treatment and vector control (Ministry of Health) was discussed with the Akuapem District Management Committee. The DMOH felt strongly that a coordinated approach of this kind was essential if bilharzia was to be tackled.

Capacity-Building of Partners

WaterAid has operated from the assumption that the capacity building of partners is crucial to sustain the programme overseas. Working from this premise, WaterAid has organised at least five elaborate training courses with the assistance of ISODEC staff from 1989-1993. These include: Orientation Package for National Service Personnel; Management Training for Board of Trustees, Management committees and Programme Managers; On-the-job Supervision and Refresher Courses; Training of Trainers; and Water Committee Training. Trainers for these courses have been drawn from a number of Government agencies, NGOs and private individuals with some degree of specialised knowledge of the subject.

The Orientation Package for National Service Personnel was found to be very useful in developing the necessary skills for community mobilisation, well construction and post-construction activities. An initial three or four day orientation is designed to familiarise the trainees with the key aspects of programme work in which they will be involved. The familiarisation process continues with six-months of practical on-the-job training overseen by field supervisors and resource people from various government and NGO institutions. This process is considered by personnel to be very helpful in developing skills and confidence.

The final training session takes place at the end of the service period. This six-week certified programme provides WaterAid with an opportunity to learn from the experiences of personnel who would have worked on local partner programmes for over six months. It also serves as recruitment ground for those with demonstrably higher degrees of competence and skills.

WaterAid has also instituted a regular system for the training of Management Committees and Programme Managers. The Ghana Institute of Management and Public Administration (GIMPA) in Accra provides training in general management, supervision, planning, finance and construction. Participation of Programme Managers in WaterAid's annual planning process also serves as a good ground for sharing of ideas and experiences. Where necessary, resource people have been brought in to provide additional support. The WaterAid Country Representative's three visits each year provide local partners with an opportunity for feedback, discussion of problems and concerns, and for on-going self-evaluation.

On-the-job supervision is thorough and generally well structured. As a valuable complement to this process, experienced programme staff carries out in-house "refresher courses". Their 'home setting' and informality implicitly involve 'learning by doing'. Most of the trainers involved in the above-mentioned training programme also receive periodic training to ensure that their input conforms to WaterAid/local partner standards, objectives and modus operandi.

WaterAid is moving towards implementing programme work in respect to the training of Water Committees. In addition to formal training programmes and workshops, WaterAid has been very active in promoting and supporting communication and cooperation between other government, expatriate and local NGO programmes, through a series of well-organised conferences.

Recommendations

In an effort to contribute to partner and local community capacity building, it is recommended that:

- WaterAid increase its programme of structured training of village-based groups;
- WaterAid take greater pains to incorporate more fully community knowledge, skills and experience in water supply, health and sanitation through skills development in participatory interactive and information gathering techniques; and
- training, research and development units within WaterAid/ISODEC be strengthened.

Community Management

WaterAid's approach in Ghana has been to operate almost entirely through dedicated local partner NGOs who receive written well applications from villagers. The application process is followed by a prolonged consultation period thus ensuring that conditions and obligations are fully understood by all involved parties. Issues discussed during these consultative periods include: how the project will be carried out; village obligations of providing sand, gravel and labour to dig the well; and how to set up a Water Committee.

Community participation is considered to be the most important feature of these projects, crucial for the operation and maintenance of water supply. It is generally believed that when communities participate fully in construction and accept total responsibility for operation and maintenance, a sense of ownership over the project develops. However, this approach to participation can merely result in community labour being used for projects, and does not necessarily evolve into the more desirable 'people-centred' approach, which empowers communities and enhances self-development activities.

Traditional customs and practices among the rural communities, as well as existing institutions like local-government initiated Town Development Committees which are made up of traditional rulers and democratically-elected members of the communities, have greatly facilitated the establishment of water committees to take charge of the projects. However, it is not always clear that all members of the communities (male/female, literate/illiterate) take part in the decision-making processes regarding water and health. In some areas, most of the Water and Health Committee members are men and/or literate.

The establishment of the Water and Health Committees, and the successful completion of the wells, has in some cases encouraged the communities to undertake other activities, including tree-planting, irrigation and income generation projects to meet increasing financial demands, including well-related maintenance costs.

Recommendations

Towards long-term community management of projects, it is recommended that:

- where an NGOs' area of operation is potentially too large, the merits of subdivision should be considered;
- every effort should be made to involve the communities in different stages of the process, assuring that members are clear about their commitments and expectations; and
- community initiatives that are clearly a spin-off from WaterAid's work should be encouraged and where possible supported by seeking alternative sources of funding.

Programme Management

The success of WaterAid in working in rural areas with its partners in Ghana is impressive. Approximately half of WaterAid's output in Ghana is being channelled through Rural Aid. WaterAid had only one employee in Accra in January 1993, its Country Representative. A Deputy Country Representative has subsequently been appointed to the larger northern regions of Ghana. Programme management is generally undertaken at the national level by a Ghanaian NGO, Accra-based ISODEC, working under contract to WaterAid. It liaises directly with local NGOs who undertake local programme management.

ISODEC's responsibilities lie in providing WaterAid with office administration, accounting services and training in human resources development. ISODEC is directly concerned with sanitation issues in poor communities and has a strong relationship with the National Service Secretariat. ISODEC staff also carry out programme management at the Accra office, work directly with NGOs and also to a lesser extent directly with London.

WaterAid has a well-defined system of monthly and annual reporting on progress and spending, from its Country Representative, through the UK-based Engineering Advisor for Ghana to WaterAid's HQ. Within Ghana, the system is backed up by corresponding monthly reports from each of the programme areas, including the local NGOs. As for current accounting processes, they have been designed primarily for financial authorisation and control from WaterAid UK down to the operating level.

The costs of transportation and communication are relatively high in Ghana. Total cost of vehicles in the 1993-94 budget is greater than the costs of either local staff or "materials for work". Massive geographical distance between the various projects makes this an issue as well as causing mild logistical problems and difficulties with administration and internal monitoring.

Over the last years, WaterAid has transformed itself from being a charity helping to meet water-related needs over a time-limited period to one with an indefinite and potentially long-term future relationship. It has recently authorised a limited three-year programme of work in Ghana. There is now a case for the “set piece” programming to be transformed into a rolling 3-5 year plan, in which the first year is a firm practical commitment, the final year an intention within a context, and the intermediate years for implementation of vision.

Recommendations

Towards more effective management of the Ghana programme, it is recommended that:

- medium-term planning with a rolling programme defining intended resource allocation and outputs of water supply, sanitation, health education and trained personnel be implemented;
- while the currently effective accounting process is driven by the requirements of WaterAid UK and is used primarily for expenditure control, it could be developed further in cooperation between UK and Ghana to give accounting outputs directly related to programme outputs;
- the possibility of concentrating WaterAid’s future activities and administration in the Northern and Upper East Regions should be considered; and
- because of transport and communication costs in a country as large and diverse as Ghana, it is recommended that the benefits of medium and long term arrangements should be considered before extending the operating areas of any NGO sponsored by WaterAid.

TANZANIA 1995 PROJECT EVALUATION

The following summarises the findings of an evaluation conducted by independent consultants in January 1995 of work undertaken in Tanzania by WaterAid

- **Evaluations Methodology**
- **Process and Progress**
- **Water and Technology**
- **Sanitation**
- **Hygiene Education**
- **Organisational links and Capacity-Building**
- **Community Management**
- **Programme Management**

For more details, please contact WaterAid

Programme and Evaluation Adviser

Facsimile: +44-171-793-4545
Telephone: +44-171-793-4500
Prince Consort House
27-29 Albert Embankment
London SE1 7UB
United Kingdom

TANZANIA 1995 PROJECT EVALUATION

The following summarises the findings of an evaluation conducted by independent consultants in January 1995 of work undertaken in Tanzania by WaterAid

By Eric Abitbol

- **Evaluations Methodology**
- **Process and Progress**
- **Water and Technology**
- **Sanitation**
- **Hygiene Education**
- **Capacity-Building of Partners**
- **Organisational links**
- **Community Management**
- **Programme Management**

For more detail, please contact WaterAid

Programme and Evaluation Adviser

Facsimile: +44-171-793-4545
Telephone: +44-171-793-4500
Prince Consort House
27-29 Albert Embankment
London SE1 7UB
United Kingdom

Evaluations Methodology

The evaluation team (ET) consisted of John Thackray (Policy Consultant and Team Leader), Terry Spens (Social Development Advisor) and Simon Trace (former Resident Engineer for WaterAid in Nepal). In addition to visiting around 150 villages, the ET met a host of participants and partners from Village Committees, District and Divisional Officers of Government through to the Principal Secretary at the Ministry of Water, Energy and Minerals. The evaluation report they compiled stems largely from these meetings.

Process and Progress

The Dodoma Region of Tanzania is home to one of WaterAid's largest programmes. Arid and poor, the region has a high population and the scale of need for water supply and sanitation is considered massive. In response to evident need, WaterAid has been working closely with the Regional and District Governments as well as local communities of Dodoma.

WAMMA (WaterAid, Maji -- Ministry of Water, Energy and Minerals, Maendeleo ya Jamii -- Ministry of Community Development, Afya -- Ministry of Health) symbolises the effective joint and cooperative working approach which has been achieved by these organisations. They have been working together at Regional, District and in collaboration with Village/Sub-Village levels, effectively linking the three key ministries of Water, Health and Community Development.

In the past, because of sheer lack of water in the Dodoma region, WaterAid concentrated its efforts and resources on water provision. Still true to this approach, WaterAid continues to carry out the bulk of water supply and sanitation work in the Region. More recently, in line with its programmes in other countries, WaterAid has introduced health and hygiene education components. While still in their infancy, these dimensions of the programme are effectively growing.

From the time of the last "mini evaluation" carried out in 1990, the WaterAid-funded programme has made very significant progress. According to the 1994 Annual Review, approximately 630,000 people have been benefiting from completed WaterAid projects in Tanzania, largely in terms of improved water supply -- the programme's leading output.

Significant extensions of the Tanzania Programme are at hand. Background studies and research for these extensions have been undertaken in conjunction with programme staff in Dodoma Region. Specifically, WaterAid is researching and planning for involvement in the Tabora and Arusha Regions of Tanzania. This reflects the positive feedback and responses WaterAid has received from the grassroots and various levels of government.

Some effective indicators illustrating the appropriateness of interventions thus far include: the willingness of villagers to exchange 10-15 percent of their household cash income for water from these projects; real reductions in walking/journey time with some of the smaller projects close to meeting the Tanzanian Government standard of a safe water supply within 400 metres of every household; and the Dutch Government and the International Fund for Agricultural Development (IFAD) in particular have shown keen interest in the work of WaterAid in the region.

Recommendations presented below are thus to be read within the context of a highly successful programme and suggest ways to improve the programme rather than significantly change its scope and nature.

Water and Technology

The engineering aspect of the programme has successfully been accomplishing its objectives. Villagers in project areas have greater access to clean water with collection distances generally, though not always, reduced. A range of technologies have been used in this aspect of the Tanzania Programme:

1. As part of a Borehole Pump & Engine Programme, WaterAid's initial response in the region was to focus on the cleaning of boreholes and the refurbishment of existing engines and pumps in an effort to revive water supplies and infrastructure that had fallen into disuse. More recently, the programme has sought to combine engine refurbishment with the renovation of existing distribution systems and/or the construction of new elevated ferrocement storage tanks and new distribution systems, to provide a more hygienic and convenient level of service.

Of all the water supply technologies funded by WaterAid in Tanzania, borehole pump and engine projects are by far the most complex to operate and maintain, involving the need for full-time pump operators, the collection of water charges at tapstands, the logistics of fuel purchase and transportation, and the regular servicing of engines. Until recently, the Government of Tanzania managed many of these functions on behalf of villages equipped with such projects. Due to budgetary constraints, in the year before the evaluation was conducted the number of mechanics in the District Water Offices and the number of Government-employed village-based operators decreased. The Water Department and WaterAid have in many cases responded to this with the promising Pump and Engine Maintenance Scheme (PEMS).

2. In a few isolated areas of Dodoma Region, shallow ground water is available virtually all year round, either in the form of small perched aquifers or as underground streams flowing within the sandy beds of seasonal streams (korongos). Where shallow ground water is perennially available, the programme's response has been to try to provide protected access to it, either by sinking hand-dug wells or by drilling tubewells using a hand-operated 'Vonder' type rig. In both cases, NIRA AF85 direct action handpumps are installed. In one case, a vegetable garden was set up next to the well by the households living closest to it.

3. Responding to need in the Kondoa and Mpwapwa Districts, WaterAid is implementing an average of 8 gravity flow projects per year in these areas. At this rate, it is estimated that the most of feasible gravity flow projects in these two districts will have been completed within three years of the evaluation. A typical project serves around 3,000 people and consists of a masonry spring intake structure, a reservoir tank and 8 to 10 tapstands. Pipelines are constructed with either MPD pipe purchased in the UK or HPD pipe purchased in Tanzania, with galvanised steel pipe used where static heads exceed 100m or where ground conditions preclude the burying of pipe. Some projects have involved the renovation and extension of projects built by the Government several years ago, though the majority of projects have been built from scratch. Members of local communities largely maintain the projects.

The gravity-flow projects have proven to be effective providers of service. There is some evidence that water usage in households close to tapstands is on the increase. It would seem that people are less likely to revert to polluted surface water sources during the rainy season where water is not paid for by the bucket. Also, walking distances are relatively short compared to pump and engine schemes. Overall, it would appear that gravity-flow projects offer a greater potential for achieving real health benefits than do pump and engine schemes and could be thus

classified as the most effective response to water needs wherever feasible.

4. Through its collaboration with the Anglican Church, WaterAid became involved in a number of projects aimed at improving the water supply and sanitation situations at mission hospitals throughout the Central Diocese of Tanzania. These efforts have facilitated the slight increase of accessible water to the hospitals, though hampered by low yields of boreholes, and in some cases by imperfect or incomplete distribution systems.

Overall, the evaluators felt that the project had gone a long way in assisting villagers in helping themselves improve access to water. At the same time, it was sometimes difficult to assess impact and effects because programme staff do not always collect information on actual numbers of beneficiaries and actual levels of benefits achieved.

Recommendations

Towards improving the delivery of water and associated technical services, it is recommended that:

- WaterAid consider promoting a standardisation of quality in the delivery or facilitation of technical services. Greater consideration should be given to the technical requirements of water flows and the more general infrastructure that allows for it;
- hand auger surveys for proposed shallow well projects should be made at the end of the dry season to ascertain the true extent of any ground water resource at the critical time of year; and
- WaterAid investigate ways in which to maximise the efficiency of the engineered aspects of its efforts, including matters related to drilling and required equipment, pump testing, and the possibility of using handpumps and shallow wells as inexpensive alternatives to pump and engine refurbishment projects.

Sanitation

Improvement of sanitation is a general aim for all project villages with a health and education component. The most important measure of success in the Sanitation Project is considered to be "an increase in the number of clean and used latrines with lids and walls and not necessarily the number of villagers who have elected to have a latrine slab." In this way, the aim of disposal of human excreta, including the faeces of very young children, could be effectively achieved.

A pilot started in 1994 increased activities and focused attention on the construction of durable and sanitary latrines. In selected villages, people chosen by the community are trained by Health Department technicians to make four different types of latrine slabs. Villages then selected one slab type from the six on offer. The project provided the material for a further six slabs of this kind to be made. A stock of slabs is thus built up which, after sale to individual householders, forms the basis for a revolving fund to finance the purchase of additional materials. These are delivered by WAMMA while other work is being undertaken. Three to four villages from each District were selected by WAMMA for participation in the project.

While the health education and sanitation aspects of the programme have contributed to the overall improvement of selected village hygiene, the evaluation suggests that these are the weakest components of the overall programme. Given the prevalence of malaria, for instance, wastewater disposal is of obvious importance. While some consideration has been given to ways in which this could effectively be undertaken, little has been done to address the need.

Hygiene education has not been as effective as it should be which has probably contributed to the fairly mixed nature of responses of villagers towards these project activities. In two of the Dodoma Urban villages, many villagers were said to be interested in latrine improvement but in a third there was a less positive response. The Mpwapwa team reported that in all four villages 'the sanitation project has not been received enthusiastically'. In the case of two Kondoa villages included in the Itaswi and Tandala projects, use of slabs has so far been minimal and the revolving fund has not yet been accessed.

Recommendations

Towards increasing access to improved sanitation, it is recommended that:

- attention should be given to drainage of wastewater and possible provision of washing slabs if careful investigation demonstrates that these would be used;
- priority be made of determining which individual behaviours carry most risk for health and which can safely be ignored; and
- more promotional work with communities be done to build an effective demand for assistance with the construction of improved latrines before the project is introduced to a full village meeting.

Hygiene Education

While this aspect of the programme is still in its infancy, it has the potential to have a dramatic effect on health in Tanzania given that hygiene and sanitation issues are gravely in need of being addressed. Water- and excreta-related diseases are among the leading diagnoses made throughout the Dodoma region of Tanzania. Since 1986 there have been increased reports of eye diseases, malaria, intestinal worms, diarrhoeal diseases and cholera, as well as high incidences of infant mortality.

In the dry season, villagers continue to consume as little as 5 litres a day, sometimes doing so even when water is readily available from the village taps. Such low consumption has inimical implications for health. During rainy periods, high proportions of villagers revert to less-safe water supplies from ponds and rivers for their water supplies rather than using project facilities.

A substantial increase in water usage would benefit health standards but the water collection return journey times, although reduced by project interventions, are still too long in many communities for this to be expected. In some villages, women and cattle have been sharing water in particularly unsanitary conditions. Where there are wealthy and powerful cattle-owners, care is not always manifested towards satisfying the domestic needs of the less well to do. In some villages, water handling and storage demand close attention given that the evaluations team came into contact with uncovered drinking water containers, as well as containers commonly used for both dipping and drinking

The programme response to this situation is a firm policy commitment to an integrated approach that, in addition to water provision, includes hygiene education and moves towards improved sanitation. Strong evidence of this commitment can be found in the inter-sectoral composition of the WAMMA Teams. Support for the District WAMMA teams in their health education work is provided by an expatriate Coordinator for Community Development and Health Education and by a Health Officer from the Regional Health Office, who has worked with the programme since 1989. Recently, a Regional Public Health Engineer has begun to assist the programme on a part-time basis.

A 'Checklist for Health Education' drawn up at a joint meeting of Regional and District WAMMA teams in October 1993 lists activities to be undertaken at community level. These include: initial contacts with village government and other leaders and resource persons; preliminary appraisal of conditions and needs, using participatory techniques; feedback of findings and other educational work at full village meetings; support and training for Village Health Committees (VHCs); and encouragement of Village Health Workers (VHWs).

In general, health education has been undertaken mainly in villages where the water component is fairly extensive. Follow-up work is planned to continue in project villages for two to three years after construction is completed. There has been little or no hygiene work in the early projects which centred on engine replacement or refurbishment.

The training and deployment of VHWs has long been a major element within the Government's policy for primary health care. Villages are encouraged to select suitable persons for training who are then expected to undertake health education in their communities with regard to environmental sanitation, household hygiene, mother and child welfare, etc. They are also expected to encourage community members to make use of the formal health services and act as a link with these. Ministry of Health staff provide support and supervision and, until recently, drugs to enable VHWs to provide simple first aid treatment. Within the community, the village government is responsible for encouraging and supervising their VHWs.

Some contact is being made with focus groups but more would be valuable. It is useful to meet women in this context as communication is often difficult for them in larger public meetings. The demands on women's time are great and not only for water collection. Other duties include firewood collection and visits to the grain mill. WAMMA staff are aware of the limit this sets on contact with women. One opportunity which is perhaps missed is at the distribution points where women may be forced to wait their turn in a lengthy queue. As pots can stand in for people, a group could readily be attracted by a compelling set of visual aids and a respected traditional birth attendant (TBA) or VHW to discuss them.

Another area to be developed, and with obvious relevance to villages included in the Bilharzia campaign, is work with village schools. School children are an impressionable group and can also be valuable communicators.

Other noteworthy dimensions of the programme include 'Health Walks' undertaken by community members as part of Participatory Rural Appraisal (PRA). Yet, participants have not consistently reflected the whole of the community.

The publication *Sofia Safi* is the main Information, Education and Communication aid used in support of community level health education. It has been widely distributed to VHWs and Health Committee members and proved to be a valuable resource.

Recommendations

Towards expanding the reach and effectiveness of health and hygiene education in Tanzania, it is recommended that:

- greater emphasis be placed on the planning stages of the health education programme, with both preventative and curative health issues in mind;
- diverse groups of society should be targeted for participation in health and hygiene education, including students and traditional birth attendants (TBAs);

- a follow-up study be undertaken of knowledge, attitudes, practices and constraints relevant to the communities with the aim of developing more effective planning, response and implementation; and
- action be taken to increase the range of appropriate educational aids in support of the programme.

Organisational Links and Capacity-Building of Partners

At the time of writing, WaterAid did not have any NGO or INGO partners in Tanzania. A few important developments are worth noting however. There has been considerable and welcome funding from Rotary International to the Tanzania Programme. Also, WaterAid was nearing the conclusion of discussions leading to partnerships with KIRDEP (Kondoa Integrated Rural Development Programme) and IFAD (International Fund for Agricultural Development). These could lead to both funding substitution and major extensions of WAMMA activities.

KIRDEP is funded by SNV from the Netherlands. It has set up a well-equipped office in Kondoa and WaterAid's Resident Engineer in Kondoa has established a good level of rapport with the Programme Coordinator. It appears that in the water, sanitation and health education areas KIRDEP's objectives are compatible with WaterAid's and that it is also keen to support community self-help and the WAMMA approach. KIRDEP's commitment is long-term and considerable advantages could accrue from the extra funding and insights from different viewpoints of integrated rural development.

The work of IFAD, funded by the Belgian State Lottery, is included in the Country Plan, with major expenditures in 1995/96 amounting to £1.44m in the first year. A strong cautionary note was sounded by the evaluations team in relation to this programme, which centres around major deep well drilling, an activity in which WaterAid has not had substantial practical in-country experience. WaterAid has been advised to take care in recruiting the right team for this work and in the management of specialist purchases for these activities.

WaterAid has moved from working closely with churches in the early days of the Tanzania Programme towards working very closely in support of Government departments. The 1990 WaterAid Evaluation and the radical shift in Tanzanian Government policy between 1989 and 1991 (from a position of full service provision, which it could not sustain, towards providing specialist inputs and support to community managed projects) have proved to be catalysts for major changes in WaterAid's own approach. WaterAid has moved towards building partnerships with regional and local government on a more holistic and community-led series of projects. In this context, WaterAid has moved from an 'umbrella project' approach (of lumping all technologically similar work together under single project numbers) to a village-based approach (where work is planned around a specific village's water, sanitation and hygiene education needs in a holistic manner).

WaterAid has effectively developed the WAMMA approach encapsulating the coordinated action and cooperative relationship shared by WaterAid and Government ministries of Water, Health and Community Development at various levels.

WAMMA operates through a Regional Committee on which the three government departments and WaterAid are represented at Regional level. Each District is represented by the officer who coordinates WAMMA activities, usually the District Water Engineer. Each District also has its own WAMMA Committee which meets monthly to manage and monitor the activities of the

field workers whom they control and which reports to and receives guidance from the Regional Committee. Indicators of the overall approach's success include the enthusiasm of the district and regional WAMMA team members for their work and the interest being expressed by the other Regional Governments in the WAMMA process.

Responding to the Government's rethinking of policy and moves towards increased disengagement in relation to water service provision, the Water Department and WaterAid have developed the Pump and Engine Maintenance Scheme (PEMS) aimed at reducing communities' dependence on the Government. PEMS trains pump operators (selected by villagers from within communities) and members of the Water Committees in basic practice concerning engine operation and simple servicing. PEMS-affiliated mechanics also make themselves available on a monthly basis for advice and assistance where required. Building on its own success, the PEMS initiative is being extended to all pump and engine schemes in Dodoma Region, irrespective of whether or not they have received WaterAid funds in the past.

On the technical end of the programme, WaterAid's medium-term strategy in Tanzania has been to develop and strengthen local, district and regional capacity. It has been committed to institutionalise working practices to the extent that district-based WaterAid resident engineers can be withdrawn over the coming one to three years with progress being made in all districts.

As VHWs have formed the backbone of the Tanzanian Government's policy for primary health care, WaterAid has been funding training of VHWs in selected project villages since 1992. These trainings follow a Government syllabus that places much emphasis on participatory techniques and communication skills. In an effort to make the training more comprehensive, WaterAid has been working to increase content related to water and environment sanitation. Within this context, WAMMA has been training an average of ten VHWs in project villages.

Towards making the educational component of the programme widely accessible, 'Training of Trainers' have been initiated. The syllabus for these trainings has also proven appropriate for Health Committees, TBAs and other resource persons within villages.

While VHWs have proven to be a valuable asset to the education programme, a number of drawbacks have also become evident. Some VHWs have dropped-out of the programme for want of an "allowance". In some situations, Health Committees have expressed regret that their VHWs could not provide first aid treatment and wished to see further training provided on that front.

A common theme of concern that has emerged regularly relates to the definition of ownership of the projects, particularly where equipment is concerned. While the Government's 1991 water policy document states that ownership of water supply projects shall be vested in the beneficiary communities, in practice villagers are being provided with equipment by the Government on a permanent loan basis, and that only with much ambiguity. Villagers must themselves also meet certain conditions concerning the upkeep, maintenance and security of the installations, which has not always been the case. The projects would thus benefit from clarification on this matter, possibly in the form of a written project agreement.

Recommendations

In an effort to contribute to partner and local community capacity building, it is recommended that:

- in response to variable quality of design by Government counterparts, particularly where concerned parties have been trained by WaterAid, further design training should be considered; and
- in an effort to maintain an institutional memory and consistency with regard to beneficiary communities and project partners, WaterAid might also consider documenting and accounting for its work more comprehensively.

Community-Management

WAMMA teams have been intensively engaged in efforts to improve community participation in the project planning process through the use of formal participatory methods such as Participatory Rural Appraisal (PRA) and PROWESS/UNDP 'Tools for Community Participation'. These efforts have also been supported by the administrative system of the Government of Tanzania which maintains that elected village government has a duty, under the 1991 Water Policy, to set up separate VWCs. These appear to have been set up in most (if not all) villages in reasonably representative fashion of the different social, cultural and gender-based groupings.

The programme is placing increasing emphasis on working with significant groups and individuals from within communities. Women are generally well represented in the village Committees. As women in the region have the main responsibility for water collection, the programme is particularly, though not exclusively, targeted towards meeting their needs and reducing the distances of water-collection journeys. Women have also become involved in the projects in various ways, including construction work, training as caretakers for NIRA pumps, undergoing PEMS training and participating in meetings and training seminars organised by WAMMA for the VWCs. Women are involved in implementing decisions, although there is evidence that women have not always been involved actually in project decision-making, particularly at the design stage.

In addition to VWCs, each village has a Village Executive Officer (VEO), village government, VHCs and villagers themselves. Each has a somewhat different role and interest in facilitating water supply, sanitation and related health education project work. Relatively speaking, responsibilities have shifted under the 1991 Water Policy from the VEO and village government to the village members. Under the policy, villagers are responsible "to operate, safeguard and meet the cost of maintenance of small projects that are already completed and handed over to the village government " entirely contingent on the village's financial ability. VWCs are formed with the intention of meeting these responsibilities, based on the principle of self-reliance.

Construction work is undertaken by villagers, usually in the form of free, unskilled labour though with some training (eg. pipe laying, maintenance skills). On completion of construction, communities are responsible, through the Water Committee, for the day to day operation of the system. Currently there is no formal hand-over of responsibilities from the Government to the village on completion of project construction work.

Recommendations

Towards long-term community management of projects, it is recommended that:

- Water Committees be better trained in account keeping and for fiscal transparency to be practised;
- as part of the clarification of responsibilities, more formal handovers be practised towards developing a greater sense of community ownership and project efficiency.

Programme Management

Over the past four years, programme staff have made considerable efforts to tighten up and improve the management of the programme. WaterAid has documented the community development aspect of the WAMMA team's work, with aims and working procedures written out and accessible in its offices.

WaterAid is using an ERS computerised accounts reporting system which facilitates fiscal reporting in a clear and understandable fashion. The Country Representative developed a system in Mpwapwa for building up cash flow predictions, monitoring expenditure against project and annual budgets, and consolidating UK and in-country accounts. It has gone some way towards meeting WaterAid's goal of decentralising accounting functions to the field. The system is being adapted for use on the whole Tanzania programme. The programme only generates and analyses cost data relating to the expenditure of WaterAid funds. Insufficient effort is made to put a monetary value on either the Government's contribution to the programme or the contribution of communities to individual projects.

Resident engineers commenting on the in-country reporting process expressed concern over the lack of feedback from the WaterAid Dodoma office regarding their reports, particularly with regards to accounts. Although Resident Engineers submit regular accounts-reports on the money that passes through their hands, they do not receive reports from WaterAid Dodoma on the expenditure made on their projects by that office, or by the WaterAid London office. Also, quarterly progress reports from the Districts tend to concentrate on progress with engineering works and make little mention of progress on health education issues.

Over the past two years, WaterAid London has markedly improved its support of the Tanzania programme, particularly with its support of the East Africa Regional Manager. In an attempt to avoid project approval delays, WaterAid plans to give approval from the outset of each new year for programmes consisting of a number of projects of specified type and size rather than for individual projects.

The staff of WaterAid Tanzania have in the past expressed concern over the quality of the feedback from WaterAid London on their monthly and quarterly reports. This issue demands immediate attention.

Recommendations

Towards more effective management of the Tanzania programme, it is recommended that:

- procedures for identifying, ranking, selecting and evaluating projects, all office procedures and the objectives and methodologies of the programme be developed towards systematic documentation and accessibility;
- as a matter of priority, a monitoring system be set up in each of the districts that collates, records and compares key indicators of the projects, assessed through time and in respect to different seasons, looking at the quantity of water brought to the house each day, the sources used for different purposes, water-collection journey times, costs and water quality;
- the programme try to compare the distribution of benefits amongst different income groups within communities with the intention of determining whether water from pumps and engine schemes as currently priced are affordable to all and with the intention of setting up fair tariff structures;
- communication between the different programme offices be developed further;

- given the high cost of transport and communication, careful pre-programming groundwork be put into optimising both the direct and indirect costs of communications and the transport of personnel and materials, and that a transport and communications plan is developed; and
- consolidation and documentation are to be given precedence over the expansion of the programme.

ETHIOPIA (HETOSA) 1996 PROJECT EVALUATION

The following summarises the findings of an evaluation conducted by independent consultants in March 1996 of work undertaken in Ethiopia by WaterAid

- **Evaluations Methodology**
- **Process and Progress**
- **Water and Technology**
- **Sanitation**
- **Hygiene Education**
- **Capacity-Building of Partners**
- **Organisational links**
- **Community Management**
- **Programme Management**

Water is Life
Traditional Oromigna Saying

For more details, please contact WaterAid

Programme and Evaluation Adviser

Facsimile: +44-171-793-4545
Telephone: +44-171-793-4500
Prince Consort House
27-29 Albert Embankment
London SE1 7UB
United Kingdom

Evaluations Methodology

The evaluation process was conducted on the basis of teamwork. Issues were discussed daily and everybody was expected to evaluate all areas of the project. Notes, ideas, information and questions were placed on the walls of the office open to everybody and comments were always welcome. Project and Bureau staff were asked to join the evaluation team whenever possible and take full part in evaluation activities. An artist was part of the evaluation team for ten days, making drawings of features and issues that came out of the leaders' and village meetings. Drawings that can be used later in health education work were also produced building on the fact that there is high visual literacy in Hetosa.

Eighteen villages were visited and a survey was carried out in 7 villages using effective participatory methods. The evaluation team pre-determined the number of villages, the type of villages and the information to be gathered and shared the responsibility of making presentations and holding discussions about the evaluation and recommendations. In the villages, the evaluation was more inclusive, involving the villagers at every stage of the evaluation and information gathering and analysis. The engineering evaluation was also considered during the leaders' and village meetings.

Process and Progress

Hetosa Woreda is a generally very fertile area. The higher area above 2,300m forms the lower slopes of Mount Bada which rises to over 4,100m. Springs occur at an elevation of 2,400m. At this altitude, water catchment areas are large and used for cattle rearing and cereal crops. The middle level plains of 2,200m elevation are extensively farmed for wheat, barley and oil producing crops. It is a highly productive zone and includes 70 percent of the population supplied by this scheme. Water resources in this area before the Hetosa scheme were limited to very low flows of certain rivers and supplies from the Gonde spring which were piped toward Iteya.

The lowlands area below the escarpment fall from 1,900m to 1,750m and are hot and very dry. The number one problem for everybody in this area is water. Two rivers not much more than streams have been the main source of water for everyone. The lowest areas have the furthest distance to travel being midway between the small rivers in the highland and the lakes in the Rift Valley floor. Collection time for water ranges between 30-60 minutes on the upper areas to 11 hours in the lowland. Lack of water in the area has been a major factor in the universal determination to help construct the water supply system and assumptions of responsibility in managing and maintaining the system.

It is useful to think of the project as having two phases. Phase 1 is the construction phase (construction of the water system and of the Community Management structures and systems). Phase 2 can appropriately be considered the Capacity-Building phase, in the wider sense. Each of these will be discussed in separate sections below.

Water and Technology

The scheme is designed to provide 25 litres of water per day per person to a population of about 68,000 in 34 communities. The project spans a period of 15 years and the length of a 140 km Burkito pipeline system. By the end of March 1996, the project will have provided safe water to over 62,000 people in 32 villages and 3 small towns.

At the time of evaluation, construction was nearing completion with 7km of pipe to lay, one

reservoir and two reservoir slabs and 28 public water points to be completed. A finishing gang was working through the system. The villagers also had a considerable amount of work to complete the back filling and fencing of the waterpoints.

The whole concept of the revised Hetosa Supply Scheme to include the lowland villages shows a most effective use of the two available springs. The general appearance of the water at waterpoints is good. The quality of design and construction was of high value and improved during the project as the water meter and gate valve are now located in a chamber rather than a hole broken out of the concrete surround.

The main pipeline is 8 inch diameter iron and 6 inch galvanised steel. Other sections are in PVC in diameters from 3 to 6 inches. The branch line to and from the reservoirs are in MPDE with diameter from 25mm to 63mm. There is one break pressure tank between the source and the escarpment to the lowlands on which there are three more.

No flow control has been installed in the reservoir inlets, ensuring a steady but never high pressure in the system and avoiding considerable maintenance. This has also resulted in regular overflow from the reservoirs, creating a public health problem as animals and people use this overflow. Also it will create supply shortages in the future when some reservoirs are overflowing and others are not receiving enough water. A channel towards the edge of the waterpoint surround should be included in the construction allowing overflow to be led away.

Another outstanding technical item is the back filling and consolidating of pipe trench as erosion may become a problem. In addition, the majority of reservoir roof access holes do not have a cover slab in place which has become a small though continual source of pollution.

Having water nearby has enabled people to make their lives easier without bringing about major differences to cultural patterns. The main benefits perceived by the villagers were the luxury of having the water and the ease of having it nearby, the simplification of daily routine activities, that animals would be watered more and easily, and washing was easier and could be more frequent. Time saved for relaxation activities is seen as the least benefit.

Twenty-two homes in 7 villages have started cattle fattening businesses as a direct result of the water. Iteya town will continue to develop rapidly. Even without the water, the town has doubled in population in the last 10 years. Now that there is water, businesses are starting in Iteya in preference to Nazareth. Two large grain stores and many shops have been built and a cattle market started in the year before the evaluation. Two large hotels are nearing completion.

There is a similar pattern in women's view of any time that is saved by having water nearby. Time is taken up with daily housework and family care activities. The women appreciated having more time to spin or make Kuna and Safed. One woman had started a market stall in Hurutu and a few others were able to give more time to making tala, the homebrew beer. Making tala is a common home-based income earner for women.

The common view is that there is a great deal of water, such that demand will never use all the water available. In actual fact, water supply has to be carefully monitored to ensure that all public waterpoints receive a reliable daily supply. The yield will probably be fully utilised before the design period of 15 years.

In the future, it will be important to reconsider an assumption built into design that all water supplied will be from water points and used for human consumption. The design does not include an increasing demand for individual connections and their larger per capita use and the dry season watering of animals. Nor does it include the potential for commercial development to demand water. As demand is transferred from elsewhere, these factors will affect the availability of water at the public water points within the next 5 years.

Recommendations

Towards improving the delivery of water and associated technical services, it is recommended that:

- the final location of waterpoints be made by the VWC at as late a date as possible before construction;
- the possibility of organising a joint spares purchasing system for all community managed gravity-flow water schemes in the vicinity be organised;
- a record of fittings used should be kept so that appropriate supplies can be purchased in time;
- the whole length of the main line should be inspected by the Technical Officer of the Water Administration Office each month to check for leaks and corrosion; and
- the level of the shelf on one side of the waterpoints be redesigned to be more appropriate for jerrycans.

Sanitation

Although there are a few sanitation facilities (ranging from 0-53 percent of homes with latrines), the situation is not a concern of the people. The incidence of some water related ill health conditions varies from village to village though in most cases, the rate is not high and no difference in health could be identified between villages with a water supply and those without a supply. Clinic returns show no change in the most common water-related diseases from the time supply started. The supply had not reached all the villages by the time of evaluation and even where there is supply, it is too early to expect significant changes in morbidity rates.

The project has assumed that greater access to water would result in higher consumption. It has become apparent that the amount of water used is not directly related to access determined by distance. In some cases, villagers are not increasing their water intake because they are simply not accustomed to using more and have not engaged in efforts to change their ways. There was no significant difference between villages that have had water for 10 months and those which have only recently received water.

Recommendations

Towards increasing access to improved sanitation, it is recommended that:

- sanitation and health components are redesigned and planned in a more positive and higher profile (eg. be described in detail in the project document, have SMART (Specific, Measurable, Appropriate, Realistic and Timebound) objectives, be given specific budget lines, reliable transport for daily use, training and long-term support;
- the Health Bureau be closely involved in planning and that they second a person who is a good communicator and has a very positive attitude to people;
- all schools and clinics be fitted with individual connections;
- when a school gets a water connection, a child-to-child programme be introduced in the school;
- too much emphasis on latrine construction be avoided for it is not a concern or issue for the people at the present time; and

- efforts concentrate on assuring that containers used to collect water are clean given the small margin that the waterpoint attendants have for wastage.

Hygiene Education

While improvement in health was one of the main objectives of the project, Health Education has become the only disappointing part of the project. The little health education that was undertaken has been carried out by the Water Bureau. This reflects the lack of interest and concern of the people who are more interested in water supply. This also reflects the interests of the project, highlighted by the fact that no data was collected that can be used as a baseline to measure progress and change.

Given the situation, the evaluation team responded positively when asked to collect information about health that could be used as a baseline in Hetosa Woreda. The research and compilation process was undertaken in a participatory way involving the villagers as much as possible. In Stage One, village leaders and representatives of the VWC were brought together in four groups on separate days to elicit their experience of the project. Stage Two saw Village Water Committee (VWC) members and trainees record health-related information from villages. At Stage Three, findings were compared with other villages and then presented. Further discussions were held with villagers on the benefits and responsibilities implied by water.

The three-staged village survey was carried out in 7 villages with 304 households in which 1,888 people live. Through the openness and honesty of the respondents, it was found that people have little idea about the health situation in their villages and appear not to feel that they have any particular health problems. Health relating to water is perceived more as 'feeling good' rather than as reduction in infections.

Findings from the survey highlight that there are few health education activities that are specific to the project and health education work is generally considered separate from the rest of the project. Health-related activities and its role in the project are not well understood or appreciated. These are probably the reasons why the Woreda Water Management Board feel that managing health education should not be their responsibility. The Health Bureau also appear not to feel a strong sense of involvement in the project or sense of commitment to the health education component of the project.

The majority of health education work, where it is being undertaken, is essentially a continuation of the on-going health education work of the health units including clinics and immunization mobile clinics. In some cases, a number of specific extra health education sessions are organised by Iteya Clinic. In another case, the health education office in Asella visited six villages with its mobile film unit in February 1996.

The Health Education Officer for Arsi Zone is the only person who has had specific in-service training on health education methods. The training consisted of 15 days on visual aids for health education and three trainings of one week on health education in general. The only training on health education received by other health staff has been that which is a part of their basic training of one and a half years to be health assistants.

Teaching methods are largely inappropriate and ineffectual. Health education that is delivered is usually composed of a quick description of nutrition, hygiene, sanitation and immunization. The visual aids are not clearly presented. No attempt is made to capture people's interest and

attention. Likewise, no attempt is made to discuss the topics that may be of interest to the listeners. There appears to be no attempt to relate the health education topics to the water supply. No questions are asked and no personal contact is made between the health educator and the people. The whole event is normally completed within 30 minutes.

Recommendations

Towards creating effective health and hygiene education in Hetosa, it is recommended that:

- all funding for health education be stopped unless the health education part of the project is completely redesigned with stronger connection between water and health and there are considerable changes to the approach, methods and skills of the educators, and to attitudes of the staff;
- all waterpoints be opened with an official meeting in which the relationship between health and water are discussed using participatory methods;
- one health person with good communications skills and a positive attitude to people be seconded from the Health Bureau to the project;
- the name be changed from 'health education' to 'behaviour change' to better describe the aim of the work;
- the Woreda Water Management Board and the Health Bureau develop specific and measurable objectives for the Behaviour Change work;
- the process of behaviour change be started with village surveys and work on the concerns and interests that emerge; and
- tap attendants not be relied upon to provide health messages for they do not like this role, their message is unlikely to carry much influence, and giving health messages when people are busy collecting water is not effective.

Capacity-Building

Training and capacity-building associated with this project have been very effective. They have generally been rooted in problem-solving methods, using exchange visits and joint training with similar projects in the Zone whenever possible.

Each village selected 2 men and 3 women to be trained. People were able to apply to their VWCs for training. Those selected underwent 30 days of training at separate times with subjects of plumbing and construction, health, home economics, finance and administration. The training days were divided into subject blocks with technical subjects taught everyday and others for 15 of the 30 days.

Training was carried out by staff from the Bureaus of Water, Health and Agriculture and in a few cases was not always accessible and directly applicable to the work of the trainees. However, the hands-on practical nature of the training enabled trainees to have developed certain types and levels of proficiency. Training more than the required number of people was planned to create competition in the community.

Trainees are considered to be the main source of expertise to run the scheme. For this to remain true to fact, they will require more training and continuing in-service training specific to their current jobs. Only with more training of the attendants and office staff will a rapport of cooperation on maintenance develop between the community, its water committee, its waterpoint attendants and the office. At present, the Administration office staff has little idea of how the system operates. A programme of operational awareness is essential.

On a related note, waterpoint attendants have received one month training in basic finance and management together with technical training on pipe laying and jointing. While they are also responsible for selling water at the waterpoints, they have no tools or repair fittings to carry out emergency work.

After the construction is complete, the project will delegate the responsibility for the management of the scheme to local management and committee groups. The Woreda Water Management Board, the Village Water Committee and the Water Administration Office require further training and follow-up support for the two years following the evaluation to ensure sustainable capacity to efficiently manage the scheme.

Recommendations

In an effort to contribute to partner and local community capacity building, it is recommended that:

- further training on participatory methods in community work be provided for the community organisers, particularly the Woreda Water Management Board and the VWC;
- staff at the Water Administration Office receive training that is specific to their individual jobs, on team work and how to carry out responsibilities of the office as a whole;
- the Water Administration Office Manager work as an assistant to the Community Organiser of the project to gain more experience in community work;
- the role of the VWC be expanded so that it can provide on-going leadership for water and health. The VWC require training to enable them to carry out this expanded role;
- each VWC be given a set of tools that it can loan to tap attendants to make the basic repairs and maintenance;
- Hetosa and Gonde-Itaya health staff be trained together, covering areas of behaviour change, communications skills, developing visual aids, participatory methods of approach, and participatory learner-centred methods; and
- reference materials for participatory training and participatory community work approaches be built up.

Organisational Links

There has been very little direct involvement or participation on the part of NGOs or governments other than that of Ethiopia in this project. Most efforts have been undertaken by WaterAid's governmental and community-based partners. Even where opposition to specific dimensions of the project has surfaced, it has emerged from within the governmental sector.

In limited cases, there have been spin-offs as with World Vision's involvement in the lowland area of the project. In Shoa villages, it has organised labour (mainly the digging of water catchment ponds and water-harvesting trenches) on a food-for-work basis.

It should also be recognised that neighbouring Dodota Scheme has provided this project with foresight in terms of the possibilities and challenges of economic development surrounding its efforts.

Community-Management

User communities have assumed the responsibilities associated with management, maintenance and finance effectively. This project is likely to be a model in community management given the deeply-maintained commitment of the people with this form of organisation. The community management scheme is further supported by the national policy on decentralisation.

The community management scheme shares its efforts between leadership and operational management. In terms of leadership management, the scheme focuses on understanding supply and demand, deciding on future water connections, monitoring the financial situation and deciding on tariff rates. Operational management concentrates principally on daily maintenance and financial activities.

Community Management and participation has been successful principally because water supply solves a very big problem. Community participation has been of the 'information/compliance' type for the construction and the 'delegated power' type of participation for community management. The project has not tried to have a continuing dialogue with the user community. As the problem is similarly defined by everybody in the community, people perceive maintenance of the whole system to be a personal benefit, feeling committed to the responsibilities of maintenance and protection of the whole system. They have thus been willing to volunteer for the common good of the water supply, offering reliable service.

For their participation, each village was asked to create a Village Water Committee (VWC) of volunteers and elect five people to be trained as technicians/tap attendants. Two people from the VWC were to be members of the Woreda Water Management Board. This appears to have worked well and those involved appear happy to contribute related time and expenses incurred. At evaluation, the VWC had a limited role, concentrating on organising community participation for construction. It has been proposed that the role of VWCs be expanded and on-going both during and after construction.

The villages provide labour to dig and back fill the trenches, general labour for construction activities in the villages and further labour for general tasks such as the loading and unloading of pipes at the project stores. Each village had to contribute to the digging of the main line and undertake all trench digging for the distribution lines to and within their own village. This required elaborate planning, transport, and other organisational endeavours which was effectively undertaken.

Water is sold at 5c/60 litres, or 83c per cubic metre. The check meter reading at the waterpoint and the charge to the private connections is 75c per cubic metre. These prices are considered reasonable by the people. It has helped that people see money from the water purchase used effectively. At the same time, tap attendants are allowed only 4 percent loss, a small amount which does not encourage them to give water away, even where it might be health conscious to do so. It is however encouraging to see that attendants only have to turn off the main gate valve when not in attendance. There is no attempt to take water at these times without payment. On a related matter, the income of the tap attendant is very reasonable considering that they live at home and can carry on farming at the same time.

Recommendations

Towards long-term community management of projects, it is recommended that:

- Phase 2 of the project concentrate on building the capacity of all those involved in community management;
- community organisation and community participation needs be given more official recognition (eg. detailed description in the project document, the community organiser to have an official role and title, to have specific line items in the budget);
- the project develop processes to communicate directly to all the villagers through village

- meetings and not communicating through village leaders;
- a small team of community organisers be built and trained that can serve this and similar schemes nearby;
- different tariff rates for public waterpoints, private connections, business connections, schools and clinics should be considered, with tariffs for private connections doubled;
- Woreda Council assist Woreda Water Management Board to collect outstanding cash contributions;
- the meter reader visit each waterpoint once per month and at the same time collect money and distribute more coupons;
- community organisation/participation receive transport that can be relied upon daily; and
- the 'loss' allowable to tap attendants be increased.

Programme Management

The project is lead and managed by the Project Steering Committee (PSC) which has the responsibility to oversee the construction of the water supply system and the building of Community Management Structures. The PSC is composed of the Arsi Zone Water Bureau, Arsi Zone Health Bureau, WaterAid, Project Manager, Woreda Water Committee, Arsi Zone Agricultural Bureau, the Irrigation & Supply Section of the Water Bureau, Hetosa Woreda Council, Hetosa Woreda Agricultural Officer, Hetosa Woreda Health Officer (Iteya Clinic Incharge), Huruta Woreda Council, Huruta Woreda Agricultural Officer and six representatives from the user community. This committee is the only body that can decide on the implementation of the project and its composite official body parts, each assuming a specific set of functions, are all responsible to the user community.

An expenditure budget drawn up with the Water Administration Office shows a requirement of 248,870 Birr in a full year of operation. Predicted income for the same period is 257,640 Birr based on the existing tariff. There is sufficient income to pay the staff of the scheme a reasonable salary and a steady income that enables salaries to be paid regularly, and to pay for the normal maintenance. It is important to note that income to cover costs depends on all the waterpoints working every day. It should also be noted that community response to pay cash contributions has not matched the contribution in labour and efforts will have to be made to collect contributions after the completion of the construction phase of the project. Good financial records are kept by the Water Administration Office and people trust the system. The Hetosa Water Scheme has shown all the signs that the user community will be able to finance the maintenance and manage the whole supply system.

When the construction is complete, a new structure will be put in place that better reflects the leadership and management role of the community structures. Under Phase 2, the operational Steering Committee will disband and hand-over responsibility to the Woreda Water Management Board and with operational management undertaken by the Water Administration Office operating under its guidance. The Woreda Water Management Board will further change its composition to include a representative of the Hetoda Woreda Council, the Hetoda Woreda Agricultural Officer and the Hetosa Woreda Health Officer, along with two representatives from each Village Water Committee. This Board and its Executive Committee will make all the management decisions and supervise the working of all staff in the project.

There are a few restraints on full community management of the programme. Officers in the Water Bureau, in the Oromia Water, Mineral and Energy Resources Development Bureau and in the Arsi Zone are reluctant to accept the implementation of community management which

would give user communities sufficient control to effectively manage the whole scheme. The major limiting factor for the community part of the project continues to be its limited resources.

Recommendations

Towards more effective management of the Hetosa programme, it is recommended that:

- the name of the programme be changed to more clearly describe its nature, as 'The Hetosa Community Managed Water Supply Scheme';
- an agreement be drawn up with all concerned parties about the definition of Community Management, and an agreement based on that definition be drafted describing roles and responsibilities of the Woreda Water Management Board and all other bodies;
- only the Woreda Water Management Board approve individual/private connections;
- the Technical Officer needs to work with the construction team and the Finance Office to work in the finance section of the project as well as working on the finances in the Water Administration Office;
- officers at the Water Administration Office be actively visiting villages and knowing what is happening in the villages at first hand;
- the project needs to be in constant dialogue with the user community and not just communicating when some practical work is required from the villagers; and
- the results of the evaluation and the village survey should be fed-back to all the villages in the scheme.

UGANDA (KABAROLE) 1996 PROJECT EVALUATION

The following summarises findings of an evaluation
conducted by independent consultants of work
undertaken in Uganda by WaterAid in 1992-1996

- **Evaluations Methodology**
- **Process and Progress**
- **Water and Technology**
- **Sanitation**
- **Hygiene Education**
- **Organisational links and Capacity-Building**
- **Community Management**
- **Programme Management**

For more details, please contact WaterAid

Programme Management and Evaluation Adviser

Facsimile: +44-171-793-4545
Telephone: +44-171-793-4500
Prince Consort House
27-29 Albert Embankment
London SE1 7UB
United Kingdom

Evaluation Methodology

The multi-dimensional composition of the Evaluation Team attests to the inclusivity of the evaluation process. In addition to those interviewed without whom the evaluation would be meaningless, participants to the process were Ben Osuga (Team Leader, external consultant), Sarah Gelpke (WaterAid UK), Monica Kunihiro (PSU), Night Nakanwagi (Kab), Grace Waako (PSU), Sam Mwanja (Kab), Pamela Kabasinguzi (Kab), Esta Kabahuma (Kab), District Health Officer (DMO), Community Development Officer (DCDO), Justin Igala (PSU), David Muhangi (Kab) and Grace Nyakahuma (PSU).

The process was WaterAid's second ever participatory evaluation. It required a shift from an externally driven audit-like approach to becoming an internally-driven learning experience for all those involved in the work. Participatory evaluations involve the collective analysis of a project by all relevant stakeholders. They are a means to assess the progress, process and effect of a project and are an action-oriented tool for capacity-building.

The evaluation actively involved members of all the primary stakeholders in the project. The WaterAid Kabarole and Kampala teams participated in all stages of the evaluation. The Directorate of Water Development (DWD) seconded two officers from their engineering and planning departments for the fieldwork and analysis. The district departments of health and water each sent one officer to participate in the participatory appraisal and related fieldwork. The team interviewed all members of the district Water and Sanitation (WATSAN) committee and later invited them to the final presentation and workshop held in Fort Portal.

There was little baseline information to record the situation and perceptions of local people at the outset of the project. This participatory evaluation gave community members from 10 villages an opportunity to give both a qualitative and quantitative analysis of the work, from initial planning to effects and impacts of the project. Time and resources did not permit a detailed assessment of the project on villages outside the project area. Members of villages not involved in the project did however attend five of the evaluation meetings and requested WaterAid to start work on them.

Process and Progress

WaterAid began work in Uganda in 1983, maintaining as its main objective to improve the quality of life of the rural poor by assisting communities to implement their own drinking water and sanitation projects. From 1983 to 1995, the WaterAid programme directly implemented projects as neither the government nor the NGO sector, effectively destroyed during the period of instability, offered viable partners. Ten years of political stability has changed the situation and WaterAid has directed its programme to supporting and developing partner capacity to undertake water supply, sanitation and hygiene education projects.

The Uganda WaterAid Programme operates under a memorandum of understanding with the Ministry of Natural Resources through the DWD. The Ministry of Natural Resources is responsible for the implementation of the Uganda Water Action Plan (WAP) formulated in 1994. WaterAid was asked by the DWD to work in Kabarole in 1992. Apart from church missions, WaterAid is the only international NGO working in Kabarole. Historically, Kabarole has lagged behind the rest of Uganda in development terms. Basic services are poor and the need for assistance in the area is great.

The Kabarole project has had three main phases: Pilot phase from 1992-93; Phase II from 1993-

95; and Phase III from 1995-97. The pilot and most of Phase I took place in the most inaccessible and needy areas of the district, Mahyaro and Ntara in Kitangwenda sub-county. In 1995, the project headquarters moved to Fort Portal and work was carried out in Rutete in Burahya, and Muguso, Hakibaale and Busoro in Burahya county.

The pilot and phase I projects were poorly planned and inefficiently implemented. Well construction has perpetually been behind target and the project as a whole has been over-budget. Recognising the need for redesign and change, the project proposal was reviewed in March/April 1995 with the assistance of the engineering advisor of Uganda. The slow pace of construction and the unrealistic initial targets prompted a decision to reduce the number of proposed wells to allow funds and resources to be diverted into the social, hygiene and sanitation components.

Since the project review in 1995, new staff have been appointed better reflecting the objectives of the Kabarole project. Work is no longer centred around engineering and a conveyor-belt construction schedule for wells. There are now three community social mobilisers and two full-time social officers in Fort Portal. A hygiene education officer was recruited full-time in January 1996. For the first time in its history, the Kabarole project came close to meeting its targets for well construction in June 1995-July 1996. A quarterly planning and review system was set up under the guidance of the new Country Representative (CR). The social team developed a programme to improve community management and participation in the work and started implementation in Hakibaale. WaterAid has joined the district water and sanitation committee (WATSAN), a coordinating body for all water and sanitation activities in the district.

The budget and expenditure over 1997-98 will need to be stretched to ensure that all components are delivered and that communities have some chance of sustaining the project themselves. WaterAid is in the process of phasing out its Karabole shallow wells projects, the only remaining project still directly implemented by WaterAid staff, over this coming year.

Water and Technology

The Republic of Uganda is a land-locked country with 95 percent of its population living in rural areas. Despite the abundance of water in Kabarole, with annual rainfall at a mean of 1000mm/mth and two torrential rainy seasons, the coverage of safe, clean water for domestic consumption is low, between 15 to 24 percent. Most domestic water in this area is taken from shallow unprotected waterholes which are contaminated by run-off and often dangerous to use. There have also been reported cases of older people and children drowning while trying to collect water from these sites.

Responding to the situation, WaterAid was involved in the construction of 203 wells by July 1996, with a further 107 to be completed before the end of the 1997-98 funding cycle. Recent quarterly reports have shown a rate of 21 wells completed per quarter, or over 1.5 wells per week. Water provided under the projects is generally of an acceptable standard for drinking, except for wells where turbidity occurs, more especially during the rainy season.

The standard of construction has markedly improved as the work has progressed. Only 3 of the mechanisms have had to be replaced by WaterAid engineers and 2 wells are seasonally dry. The choice of shallow well- technology appears to have been correct judging from results thus far. NIRA AF85 Finnish hand-pumps have so far given excellent results since their installation commenced in 1993. In the maximum period of three and a half years since first installation, there is no evidence of wear and tear of any kind on any pump. Still, all involved agencies have

expressed concern about the future availability of spare parts and trained technicians for the Tanzanian NIRA AF85 pumps though it is possible that the DWD will be able to supply WaterAid project villagers with spare parts in the future given its adjacent project in the region.

In all cases, under the Pilot and Phase I of the project, drainage channels have been provided to drain the well-head area and discharge to a suitable outfall. In most cases, soakaway pits have not been required though in some cases, drainage would have been more satisfactory if the well had been sited a metre or so higher.

On the whole, people and agencies were pleased with WaterAid's contribution to water, hygiene and sanitation work in the district. On average, journey times were not reduced but access to and interest in clean water increased. Women reportedly spent between 15 minutes to one hour collecting water, enthusiastic about access to clean well water. Women expressed a willingness to walk further to fetch water or wait longer at the pumps to collect water for drinking.

Safety standards implemented by WaterAid appear to be satisfactory and respected. WaterAid staff have reported collapses in about 1 of 20 wells sunk using Modified Chicago Methods. There have been no fatal accidents and minor injuries only were sustained in the early stages before proper equipment was available and before temporary support lining was implemented. Many children explain that their mothers now send them to fetch water more often because the wells are safer than the dangerous open water holes used earlier.

Despite the poor functioning of all Pilot and Phase I project Village Water Committees (VWCs), about 50 percent of these earlier sites were well maintained and clean at the time of evaluation, with areas around the sites planted with grass and fences to keep livestock away from the pump area. It is generally the family living nearest the well which undertakes these responsibilities. The remaining 50 percent were not adequately protected or maintained. In Phase II sites, wells were being well maintained, with more well users taking responsibility for keeping the grass cut and fences strong. If one aspect of this component needs greater attention, it would be in terms of the mobilisation of communities and the lack of liaison that has occurred with them.

It is too early in most communities to fully appreciate the positive and negative impact of the wells. Still, developments in communities who have had a well for longer than two years illustrate the trends, progress and impact of the project. In some villages, income-generating activities have been started as a result of the wells. In two villages, people mentioned that water-related illnesses such as diarrhoea and worms had decreased. Women in particular reported a positive impact where less disease and illness resulted from using clean water for cooking and drinking.

Recommendations

Towards ensuring that appropriate and sustainable technologies are used, it is recommended that:

- the pace of construction be moderated to allow time and resources for the social team to cover past project sites adequately;
- the shallow well programme be extended into further parishes not yet served and additional wells be constructed in parishes/villages where the target population served has not been achieved per well;
- the current design of pump mounting and well access be reviewed and confirmed. Padlocks should also be provided for removable covers;
- the adoption of spring protection, well rehabilitation, and hand-drilling wells be considered a

- subsidiary project activity of a limited scale and to a limited proportion of the budget;
- more pump-out/recovery tests be used to determine the yields towards aiding in the determination of use of hand-drilled wells as opposed to hand-dug wells; and
- on a technical note, it is recommended that pumping be determined to serve 250 people per well with 25 litres per head per day, over 8 hours pumping, at a yield of 780 litres per hour, or 6240 litres of storage.

Sanitation

Sanitation and hygiene education components were only implemented in the last nine months of the project. Before that time, the only sanitation and hygiene education activities that took place were through the independent efforts of WaterAid's community mobilisers. They carried out basic health activities with women, promoting the use of drying racks, sweeping around compounds, plastering house walls and household waste disposal. With the 1995 project review, staff and resources for these components were made available from February 1996, though they remain too low to be able to cover both past and present project areas effectively.

Still, the team who manage this component have done surprisingly well in the short time they have been operational, both in terms of sanitation and hygiene education. They have revisited most of the past project sites and trained parish committees on their roles as well as introducing some basic hygiene and sanitation messages for them to transmit to the Village Well Committees (VWCs). A hygiene and sanitation coordinator has been employed on a full-time basis in Kabarole which has significantly improved the management and monitoring of this component of the project. Baselines have been taken in all the new project sites and the team are in the process of developing new participatory techniques with the assistance of the Programme Support Unit (PSU).

A casting yard has been established in Rutete to make cement blocks and sanplats. Three Ugandan engineering students helped to design and fabricate moulds for sanplats. Uptake of sanplats has been very limited because of financial constraints in communities. This might also be due to insufficient promotion of sanplats at both parish and community levels by an over-stretched team. There has also been some termite destruction of wooden supporting beams for sanplats which have been known to fall down the hole as a result of damage. The team is looking into termite resistant wood and other alternatives.

Interest in sanitation and hygiene education is high among community members and women have greater awareness of safer hygiene and sanitation practises than men. Still, it is too early to make any statements about the effects of the project on hygiene education and sanitation in the district.

Recommendations

Towards improving WaterAid's response to sanitation issues in Uganda, it is recommended that:

- more staff, time and resources need to be developed to this area if it is to be able to fulfil its responsibilities;
- baselines be carried out in all communities to assess the need and type of further hygiene and sanitation work;
- train both parish and village water committees to ensure full understanding of hygiene and sanitation issues;
- both men and women be targeted for hygiene education and sanitation promotion. Men need to be aware of the need to build latrines because women are not culturally allowed to do this

- themselves; and
- the possibility of subsidising sanplats be reviewed.

Hygiene Education

This component of the project, like sanitation, was introduced as an afterthought. It was in part motivated by the realisation that while about 75 percent of households in Kabarole district had a latrine, their actual use appears to have been low. Towards increasing their use, and community appreciation of the need for clean water and hygienic practices, WaterAid has worked with some local NGOs both in training and implementation of hygiene-related projects.

The Ntuuha Drama performers, for instance, have had a strong localised impact on hygiene knowledge and practices in the communities it has visited. WaterAid started work with the performers in January 1996 with a training session for the actors in participatory approaches to hygiene, sanitation and wells operation and maintenance held by the PSU and NGO unit. In late-January, a pilot project of several hygiene and sanitation drama performances was started in Kabasi and Kahangi parishes in Hakibaale sub-county. This team is overwhelmed with the enormity of the work it has to catch up, but is making a valiant effort.

Recommendations

Towards designing effective responses to health and hygiene practices in Uganda, it is recommended that:

- diverse means of reaching the population using the Ntuuha drama group and other drama groups more effectively be assumed, aware of the need to include less messages per show, practical demonstrations on pump repair and ash in pit latrines, more on-the-spot evaluations after each show with a wider dis-aggregated sample, community involvement in suggesting new topics and developing new sketches;
- the Kabarole team inquire whether the newly-opened "Voice of Toro" radio station is open to the idea of broadcasting hygiene and sanitation messages as part of its programming;
- technical activities and resources to release funds and equipment for hygiene and social components be decreased. This might involve recruiting additional staff to carry out hygiene and sanitation work, or changing the ratio of technical staff to hygiene and social staff so that there is a greater emphasis on the 'soft ware' components of the work; and
- WaterAid collaborate closely with other agencies, both government and NGO to improve the spread of the component.

Organisational Links and Capacity-Building of Partners

Coordination with government water and sanitation agencies has been weak until 1996 when WaterAid joined the district WATSAN committee and the Rotary Club. Both institutions have a major influence in the district as a whole. The WATSAN committee tries to coordinate water, sanitation and hygiene/health education activities, but the government departments lack resources and staff to plan and monitor a district wide water and sanitation programme. The National Water Programme Strategy has yet to be finalised, which hampers the development of a long-term implementation plan.

WaterAid Kabarole has worked closely with NGOs such as the Mayhoru Welfare Association, the Roman Catholic Diocese and UCBHCA but only in small projects with specific collaborations. The Ntuuha Performance Group have been employed by WaterAid on a contractual basis to provide educative dramas on hygiene and sanitation in a few communities. None of these relationships are on a firm footing. There is some overlap with government water

committees, though these need to be reviewed in terms of sustainability of water and well institutions. There is great deal that can be improved in terms of WaterAid linkages with government and NGOs in the field.

Capacity-building

The Programme Support Unit (PSU), operational since 1993, has given some guidance on the development of the Kabarole project's social components. Since the 1995 review, the PSU have been particularly active, having carried out a workshop and training needs assessment for the Kabarole staff aimed at integrating water, sanitation and hygiene education activities, and conducted an evaluation of the Ntuuha Drama Group. The PSU has also organised a training session of parish water committees in Hakibaale and Kitangwenda. It planned a baseline collection in these areas and developed a baseline chart, organised the sharing of ideas/experiences between Kabarole and other WaterAid funded projects, and designed and undertook an induction course for the new Hygiene Educator.

An NGO unit was created in 1996 to assess the ability of potential partners and to help build their capacity to be able to implement projects themselves. The Karabole project had not had the assistance of the NGO unit by the time of the September 1996 evaluation. It has therefore been difficult for the Karabole team to build up partners without this assistance. Thus far, it would appear that few if any NGOs in the area have the capacity to manage all components of WaterAid's integrated project approach. The only potential partner is the Catholic Diocese which has already received field-based animator hygiene education training by the PSU and is interested in further collaboration.

In January 1996, the PSU trained the Kabarole social team in the use of participatory tools for hygiene and sanitation promotion. They used a set of 'toolkits' developed in 1994. There are six tools in the kit, most of which are based on the PROWESS, PRA and PHAST methodologies, Story-with-a-Gap, Sanitation ladder, Mapping, Three-pile Sorting, Faecal-Oral Routes, and Gender Analysis of men and women's roles concerning hygiene and sanitation.

The Kabarole team received training on working with Village Water Committees (VWCs) in a workshop entitled "Training of water committees on the management of funds for operations and maintenance" and included book-keeping, banking funds, budgeting, accountability and presentation skills for partners. The Kabarole manager has since set up a planning system which is reviewed each quarter with the rest of the Kabarole team.

A refresher course in PRA was given to the evaluation team at the beginning of the evaluation. Given limited capacity building initiatives undertaken throughout the project period, it is not surprising that during the training it became apparent that the team had a limited appreciation of the principles behind participation and the potential of the instruments and techniques. The team was largely comprised of participants from the Kabarole project.

There is some concern among staff members that project decisions are taken in Kampala without reference to Kabarole staff and important information is not passed on to the team in Kabarole. The initial management set-up did not equip Kabarole staff to manage work themselves and left them in a situation of dependency. Over the 18 months from the evaluation period, WaterAid plans to change the nature of the work of Kabarole from a WaterAid project to possibly a self-contained partner organisation. It should therefore be understood that this will inevitably change the nature of the relationship between the two parties. WaterAid's role could be essentially one

of advice and support and not direct management. It may be that the Kabarole team do not want to form a partnership organisation and that the work will cease once this funding period is completed.

Recommendations

Towards facilitating processes aimed at building sustainable capacity of local partners, and improving links with organisations in the field, it is recommended that:

- the PSU and Kabarole teams work together to review the O&M manual (1995) and develop a training programme for communities and committees;
- as the toolkits are updated by the PSU, a wider range of tools and techniques be developed with serious attention paid to building on local hygiene and sanitation knowledge and practices;
- the NGO unit assess and work more closely with potential partners in the district and the Catholic Diocese of Fort Portal in particular, to help build firmer relationships, determine current capacity and establish whether they are a viable partner for WaterAid in Karabole district; and
- closer ties be forged with government WATSAN work in the form of exchange visits, joint planning meetings, and linkages being made with water and well committees at all levels.
- PSU, TSU and NGO unit support the Kabarole staff through the transition from being a WaterAid project to working as a partner. This support should include training in project management and proposal writing skills; and
- the next phase for follow-up work could be budgeted and planned for by the Kabarole team with the assistance of the PSU, with a completion date set at fiscal year 1998-99.

Community Management

In the first two years, community participation was limited to the construction phase of the project, with little input into planning, monitoring or the determination of roles and responsibilities of well and water committees. It was often the case that committees were formed in disregard of indigenous or government institutions already present in the communities. Despite poor community involvement and ineffectual committees, many wells are in constant use and are maintained to some degree by community members.

The issue of operations and maintenance roles of communities and committees was not well thought out and both the team and committees were unclear of how to proceed. Few funds have been collected to pay mechanics and to provide for spare parts in the future. Where funds are collected, there is often the problem of safe storage as there is rarely a rural bank available. For some years, failure to practice proper hand-over of the wells to communities led to confusion about ownership and responsibility for the wells. The haphazard implementation of the community component of the work has resulted in a situation whereby in some villages, communities are not aware of the role of committees or of their own required duties to contribute towards O&M. A formal hand-over ceremony has been practised since March 1996 which has had an impact on improving community management.

Improvements in participation and community management originally stem back to the project review of 1995. A new CR and Kabarole project manager were appointed and WaterAid's Strategic Framework setting out guidelines for small-scale community managed schemes was approved by council. Communities are now involved in planning and construction, and well committees have been formed in all communities. Participation further improved with the recruitment of two field workers active through community mobilisers (parish chiefs, local

leaders, local council levels, and women's group leaders). The mobilisers brought the community together for introductory meetings with WaterAid Staff, for committee elections and for information gathering and analysis sessions to design and plan projects.

New institutions to manage water have formed at village, parish and in some areas, at sub-county level. These include WaterAid Village Water Committees (VWCs) which operate at the same level as government administrative council levels (L.C.III to L.C.I). Both systems encourage communities to bear responsibility for contributions and self-maintenance of water sources. In some communities, for instance, income-generating activities have started as a result of the wells.

In earlier projects, little attention was paid to training VWCs. Training for operations and maintenance at this time focused on caretaker maintenance of the area around the wells, and hand-pump mechanic training in cleaning sludge from the working parts of the pump every three months. Later projects did involve some training, but there was still no standard approach for well management. This has resulted in a diversity of approaches, not all of them consistent with WaterAid's ethos of targeting the poorest in communities. Training communities in O&M contributions and long-term savings for spare parts has improved further in March 1996 when the Kabarole team started a responsibility matrix used to train members of the VWCs and parish well communities.

As women generally have little access to most resources while heading about 30 percent of households, an ongoing effort to incorporate gender and women's strategic needs has been made in the election of committees. Villagers elect nine community members on well committees. Currently, four out of these nine members have to be women. Two members from each village well committee are then elected to represent the community at the parish level. The parish committees have eleven members but gender balance is not so strictly enforced. Women in all the above committees are often unable to contribute to discussions because of rural gender rules.

Some of the VWC members have formed into Parish Water Committees (PWCs). These PWCs were more active, and supported each VWC with its responsibilities. As the roots of a mobilising and education force in the community, the PWCs created a forum for people from different communities to get together. This paralleled government levels but involved different groups of people, including a higher percentage of women. On another front, some short-term training courses and support have been given to community-based health care organisations (CBHCs), the Wahyoro Welfare Association and a few women's groups.

Still, much work remains to be done if the work is to be rooted and sustained. This involves proper maintenance of wells and a continuation of the promotion of hygiene and sanitation education through PWVs. There are still no agencies in Kabarole district with the capacity to take on WaterAid's integrated approach.

Recommendations

Towards effective community management of projects, it is recommended that:

- the team focus their attention on communities which have expressed a definite commitment to the type of project WaterAid can offer;
- a definite approach to determine the process of community management be chosen. The PSU should assist with this and train Kabarole staff and committee appropriately;
- discussions be held with both men and women in separate focus groups disaggregated by age

and also in well-facilitated plenary sessions to improve women's participation in decision-making;

- both men and women be involved in baseline work and planning and steps be taken to understand their practical and strategic needs;
- well committee training be undertaken during construction as this seemingly improves success rate for O&M fundraising and in promoting hygiene education, and more generally support from the communities;
- the possibility of merging WaterAid committees with existing government water committees be considered;
- VWC training include operations and maintenance activities as well as communal fund management, book-keeping and community mobilisation skills to help committee members perform their duties more effectively. This training should include as many community members as possible so that VWCs have their support once WaterAid has handed over the wells;
- programme staff learn from community members and committees showing signs of success and then incorporate lessons learnt into VWC training. Villages which have managed funds for wells could be used to train other VWCs. Successful committee members could be employed to train other communities;
- community involvement be consolidated by providing social and technical inputs to assist communities in undertaking O&M responsibilities fully themselves. Pump maintenance manuals could be issued to communities;
- community management training should make clear that contributions for well maintenance are voluntary and managed by the VWC; and,
- the capacity of community management structures be improved through training and effective monitoring over a 1.5 year period.

Programme Management

Until the project review in 1995, the Karabole team was managed by the WaterAid CR in Kampala. The team received no support from the PSU and had little input into work plans. This has improved since that time but there remain problems with management style and approach. The team were not consulted on important issues and generally felt excluded from decision-making and participation.

Poor planning, lack of staff and resources for the hygiene, sanitation and community management components have resulted in uneven implementation of different components of the project, causing the hygiene, sanitation and community management components of the project to lag behind. A centralised process meant the team had little to no freedom to make decisions without constant referral to Kampala, resulting in severe implementation delays.

Work has progressed systematically through the 1995 planned programme of activities and is more responsive to changes in local conditions. An emphasis still remains on engineering aspects of the project which diminishes hygiene, sanitation and community management aspects and mobilisation activities. While engineering work continues in linear fashion, the social teams are stretched to cover both past and present project sites. The social and technical activities are uncoordinated because the social/hygiene activities are not integrated into quarterly planning. Collectively, these factors affect the staff's ability to work as a team and compromises the quality of the work and the impact WaterAid Karabole has on communities it serves.

Financial issues were a constraint and constant consideration as the initial budget and over-

ambitious targets for well construction did not take into account the cost of setting up a base camp in a remote area or repairs to vehicles working on difficult terrain. Expenditure and the costs per well, and per person, were vastly higher for the Pilot and Phase I project. In Phases I and II, non-construction aspects of the work were budgeted separately in blanket proposals, with unrealistic objectives, little planning or a time-bound framework for their implementation.

There were no baseline surveys in the first three years of the work, making progress and impact difficult to monitor. Where monitoring of project implementation has occurred, it tended to record construction activities and deadlines, with short narratives on community mobilisation and hygiene education.

Recommendations

Towards improving programme management by maximising resource efficiency, it is recommended that:

- WaterAid carry out baseline surveys as a basis for planning, monitoring and review of future work;
- participatory planning, decision-making, budgeting and an integrated approach to the work be implemented towards improving team commitment and cohesion;
- support and mutual learning with PSU and NGO initiative be increased, both in the classroom and in the field; and
- the project be restructured in favour of an administrative support team of 3 staff based at Fort Portal assisting small multi-disciplinary teams decentralised to sub-county level for periods of time where they can be most effective.

NEPAL 1997 PROJECT EVALUATION

The following summarises findings of an evaluation conducted by independent consultants of work undertaken in Nepal by WaterAid since 1987

- **Evaluations Methodology**
- **Process and Progress**
- **Water and Technology**
- **Sanitation**
- **Hygiene Education**
- **Organisational links and Capacity-Building**
- **Programme Management**

For more detail, please contact WaterAid

Programme Management and Evaluation Adviser

Facsimile: +44-171-793-4545
Telephone: +44-171-793-4500
Prince Consort House
27-29 Albert Embankment
London SE1 7UB
United Kingdom

Evaluation Methodology

The 1997 Nepal evaluation was a collaborative effort between WaterAid UK, WaterAid Nepal, NEWAH and the Evaluation Team (ET). Compass Partnership was commissioned to undertake the evaluation for WaterAid's Nepal field office and the Terms of Reference (TOR) were developed with NEWAH and WaterAid staff in London. The ET comprised three members, including John Tierney (management specialist and senior consultant), Ragghoo Pannu (fundraising specialist) and Hazel Slavin (specialising in health education). Fieldwork was carried out by the consultants during March and April 1997.

Evaluation methodology attempted to strike a balance between a 'cold' external evaluation and a more participatory approach to facilitate learning during the course of the review. There were nine principal stages to the evaluation: briefing and analysing documents; focusing fieldwork topics; data collection; clarification of issues; ET-led workshop to review initial findings; report drafting and revision; NEWAH-led working groups on each objective; NEWAH-led workshop to agree on the way forward; and finalising the report.

The consultants shared their early impressions during the fieldwork with NEWAH's senior staff team and the WaterAid country representative both informally and in the form of a list of questions which formed the basis of a subsequent workshop at the end of the fieldwork stage. The purpose of the workshop was to involve and consult the people involved at as early a stage as possible, to ensure greater commitment to the final recommendations. The consultants were not involved directly in the working groups nor in the second workshop. Specific recommendations were developed jointly between consultants, NEWAH and WaterAid Nepal, and incorporated into the evaluation as agreed.

Process and Progress

WaterAid's activities in Nepal constitute its largest programme in South Asia and its fifth largest globally. WaterAid operations in Nepal began in 1987 with the posting of a resident engineer who worked initially with the Social Services National Coordinating Council (SSNCC), forerunner of the Social Welfare Council (SWC), to assist local NGOs' drinking water and sanitation schemes. It also posted a resident engineer to work with the Agricultural Development Bank of Nepal (ADBN) to assist a UNICEF-sponsored water and sanitation programme for low income farmers' cooperatives.

Since the first external evaluation in 1990, WaterAid's programme has developed considerably. WaterAid has sponsored the development of a local NGO, Nepal Water for Health Agency (NEWAH) with which it has developed a close partnership as the sole implementing vehicle for WaterAid funded schemes in Nepal. NEWAH is a credible, reliable, committed and professional agency which works with local structures. In terms of financial commitment, since 1987 WaterAid expenditure has risen to £800,000 a year.

The needs in Nepal are great. Sixty-six percent of the population of the hilly areas (6 million) and thirty-eight percent of the population living in the plains or Terai (3 million) are without safe drinking water, according to the 1991 national census. Seventy-eight percent of the national population (14 million) do not have safe sanitation. It is estimated that there have been about 400,000 beneficiaries of WaterAid/NEWAH work.

Water and Technology

From a technical point of view, there are three principal types of water schemes. Gravity-fed schemes are principally used in the hilly areas. Tube and hand-dug wells are a feature of Terai projects. Spring protection schemes have also been underway. Eighty-three percent of beneficiaries of WaterAid/NEWAH projects were served by well schemes.

Water and development issues related to water are a national priority and NEWAH has become a respected and professional player within the field. NEWAH has developed a sensitive and robust methodology for rural water supplies. It is a leader in a sector in which there is said to be in practice a leadership vacuum. At the level of communities in Nepal, there is much interest in benefits which accrue from NEWAH's approach. MPs and other community leaders are referring local self-help NGOs to NEWAH for assistance.

Sanitation

The impact of the project, and of health education, on sanitation has been significant. All latrines observed by the ET were clean and well maintained. Soap was offered for hand-washing. Tapstands are clean and in some cases, community users have decorated them with a choice of tiles towards reinforcing key messages. Large numbers of drying racks are constructed and used. Water was being stored appropriately in a covered pot which was raised from the ground.

In the Terai, where many people have insufficient land to build individual latrines, two to three households sometimes share a latrine. On another less promising front, some schools near the project areas are still without a latrine. This runs counter to NEWAH policy which insists that schools within project villages have at least one latrine.

Recommendations

Towards improving sanitation in Nepal, it is recommended that:

- the needs of schools be addressed and NEWAH ensure that all local schools in its project areas build at least one latrine; and
- the sharing of latrines in Terai be considered as a possibility worth monitoring as it is less expensive for householders, needs less space and is potentially less expensive and time-consuming for NEWAH as well.

Hygiene Education

There are two posts in Head-Office to coordinate and manage the Health Education programme: the Health Coordinator and the Deputy. At the regional level, there are Health educators, Senior Health Supervisors and Health Supervisors. Senior Health Motivators, Health Motivators, and Health Volunteers are all drawn from the village level. This reflects a fairly elaborate network of human resources devoted to health education issues and activities.

From August 1996, a change of emphasis was underway in the training of Health Motivators. It was to focus more on information providing an overall understanding of the causes of disease as well as suggestions for treatment of a number of common ailments. It includes sections on immunisation, diarrhoea treatment/oral rehydration therapy/malnutrition, skin diseases, wound care, eye diseases, worms, dangerous animals, mosquitoes, and home remedies/water as medicine. It also maintains the original sections on the faecal/oral route of transmission, water use and storage and latrine use. The curriculum attempts to communicate ideas of infection, pollution and inculcate 'germ theory' to dispel local folk beliefs about the spread of infections.

Upon completion of basic training, Health Motivators receive a number of tools for their use: a tin trunk containing education materials such as posters, UNICEF and SARAR materials, cloth charts and flannelboard with flannelgraphs prepared by themselves; a bag to carry their equipment around the village; and two brown 'uniform' saris.

Refresher trainings provide teaching practice in the classroom and field, and include a variety of useful and required techniques, including monitoring and PRA techniques, puppets for education, role plays and the use of drama in education. They consider the role of the Health Supervisor in the field as well as methodologies of feedback and comment on field experience.

Health supervisors and health educators have no planned staff development but have the opportunity to learn about new issues during their twice yearly meeting with the volunteers.

Undertaken concurrently with engineering and building work, health education activities are designed to ensure that the water and sanitation programme invite improvements through sustained health-related behavioural change. Health education is a planned programme which includes three crucial elements: the provision of useful and timely information; attempts to clarify values, attitudes and beliefs; and the teaching of and improvement in existing, specific skills.

NEWAH's health education work is directed at women and their children, assisting in the development of women's education and their assertiveness both domestically and within the politics of village life. Still, men would benefit for being targeted specifically as they tend to hold power in most communities through access to finance.

The current school curriculum material for health education is old fashioned and unlikely to engage the creative interests of young people. The sustainability of a health education programme is most likely when children are involved through school education, during child-to-child activities, reinforced by messages from home or giving messages to adults at home. Worldwide, child-to-child education has been shown to be a successful health education method, particularly where girls are involved.

Recommendations

Towards designing effective health education in Nepal, it is recommended that:

- health education staff capacity at the national level be increased;
- assessments be conducted of the ability of Health Motivators to use new information from training to gauge changes in a range of health behaviours of villagers; and
- the new training curriculum be reviewed after two years.
- the work of the health educators and senior health supervisors be fused into regional health education posts;
- Health Motivators, particularly male, be trained and paid up to two or three years after project completion;
- NEWAH consider the possibility of entering into partnership with the Ministry of Education to produce up-to-date and lively material on health issues. Funding for a special post could be sought;
- NEWAH return to completed projects every three to four years to reinforce health education messages, perhaps changing slogans, images and printed material every six to nine months;
- stickers depicting the same messages as its ceramic tiles be considered, to be placed inside latrine doors, within schools and health posts and in other public places; and
- child-to-child educators receive specialist training.

Organisational links and Capacity-Building of Partners

WaterAid has developed a unique and effective delivery model for the water sector and from which other agencies want to learn. WaterAid's unique willingness to collaborate and share its learning with other agencies has earned it an enviable reputation as an agency with integrity.

NEWAH, WaterAid's local partner, has formal written agreements with two quasi-governmental bodies, SWC and ABDM. Until recently, one of the members on the Executive committee was from ABDM. At the time of evaluation, neither of these agencies had a voice on NEWAH's governing body. Some current members of NEWAH's Executive are said to have affiliations (formal and informal) to the previous governing party, the Nepal Congress Party. The other main political party (the Marxist Leninist Party) which led Government at the time of evaluation continued to have no voice.

NEWAH's President, Ajaya Dixit, a prominent specialist within the sector, has been appointed by the Government to advise on a policy for water sector resources. This appointment demonstrates NEWAH's credibility and new partnerships through which NEWAH can exert influence. Still, this should not obscure the fact that the health team in NEWAH has little contact with either Government agencies or (I)NGOs in respect to health education issues.

Recommendations

Towards developing and increasing effective links between water-related organisations and structure, it is recommended that:

- NEWAH's Health Coordinator operate within an arena where health education/promotion ideas are discussed and debated in order for NEWAH to retain and advance its leading position;
- Health Coordinators begin to network with (I)NGOs and some Government departments, particularly within Kathmandu; and
- NEWAH consider subscribing to some international journals which debate health education issues and explore the relationship between the theory and practice. NEWAH is well-placed to contribute to this debate and should do so by providing journal articles and papers at conferences.

Although originally set up by WaterAid, NEWAH is an independent and healthy agency, now the largest NGO specialising in the water sector in Nepal. Despite the organisational divide, NEWAH and WaterAid retain a very close relationship with two-thirds of NEWAH's income coming via WaterAid. WaterAid posts a resident engineer to NEWAH and WaterAid's CR shares an office with NEWAH and carries out his work in close conjunction with the organisation.

NEWAH employs around 100 professional and support staff, and works with over 50 different small NGOs and farmers' groups across all five regions of Nepal. The Senior Management Team (SMT) of NEWAH consists of 14 members. This team comprises a Director and four groups referred to as Professional, Operation, Support, and Others. An expatriate resident engineer, appointed by WaterAid sits as an observer. Regional Coordinators, the newest group still in the process of establishing themselves, reflect the primarily geographical structure of management.

There are challenges on the horizon for NEWAH that stem from WaterAid's decision to give its local partner a three-year timescale in which to raise its own core funding. It is a difficulty compounded by UNICEF's simultaneous decision to cease funding water and infrastructure

projects through WaterAid. In response, NEWAH has begun to introduce a strategic and operational planning process. It aims to plan for static programme growth by continuing to support 50 projects per annum.

In order to become a truly independent agency, NEWAH has to broaden its range of funders, both locally and internationally, and improve fundraising capacity-building. As part of the process, it has developed organisational literature, is developing an annual report for the first time and is having its accounts audited externally. It has also developed its own relationship with two international bodies on participatory action research and community management.

At evaluation, NEWAH had sent two key staff on training courses and made some initial soundings amongst donors, so far without conspicuous success. The Board deferred its support of the establishment of an in-house fundraising team. Senior staff members admit that they are anxious about this area, both in terms of their own skills and experiences, and in terms of their expectations of the possible. WaterAid has indicated its willingness to back a well-argued fundraising strategy with capital and professional support. In the meantime, all staff donate 1.5 percent of their salaries for NEWAH in an internal payroll giving scheme.

Though small efforts are underway, fundraising remained a low-priority area for NEWAH at the time of the evaluation. No follow-up had been carried out on previous efforts and senior staff had created much time to devote to fundraising. The skills and influence of senior staff and Board members may not be adequate at this stage to guarantee success.

On related internal organisational matter, staff report concerns over tenure, salaries, as well as training and support. In general, training that NEWAH staff receives does not accurately reflect an analysis of the training requirements to meet strategic goals, nor the individual aspirations of staff as identified in their annual performance reviews. For its size, NEWAH's salary scales appear overly complex and have unusual differentials between grades.

As part of its monitoring and evaluation activities, WaterAid has received reports on action from NEWAH. As NEWAH has developed and grown into an independent agency, WaterAid's Nepal field office has gradually passed over functions it previously carried out on NEWAH's behalf. The two main functions WaterAid continues to perform are the advocacy and donor relations functions. In this way, WaterAid has handled (and continues to handle) all of NEWAH's external relations, though this is beginning to shift.

WaterAid's decision to give priority to internal organisational matters and relations with partners within its sector was an appropriate one during its early years, while it established the programme and set up NEWAH. The critical strategic choice for WaterAid today is whether to develop an additional portfolio of work in Nepal, or now that NEWAH has become more established, work exclusively through NEWAH. The relationship option to which NEWAH and WaterAid aspire has not been made explicit in WaterAid's policies and plans.

Recommendations

Towards building the capacity of NEWAH and determining WaterAids' future role, it is recommended that:

- WaterAid Nepal strengthen its direct lobbying on policy matters;
- WaterAid Nepal coordinate NGO efforts within the water sector;
- WaterAid Nepal research and record good practice and case histories for future dissemination;

- WaterAid Nepal raise the profile of NEWAH's director;
- WaterAid refrain from developing its own processes and profile in Nepal independent of NEWAH. Its priority should be to monitor and help NEWAH build capabilities, in terms of international donor profile and local fundraising;
- WaterAid and NEWAH determine areas of organisational life for which WaterAid should take lead or carry out specific functions, and in which areas it should act as a supporter or mentor to NEWAH, its Director and President;
- a systematic analysis of development plans (in APRs) and corporate strategy be designed to develop a staff development and training strategy which includes all members of the SMT;
- WaterAid develop a time-limited (and informal) contract of support with NEWAH, explicitly stating each one's functions; and
- WaterAid's offices be moved out of NEWAH's building.

Fund-raising

- NEWAH define its key messages and critical audiences. It should assess their levels of awareness of NEWAH now, plan a communications programme and assess its successes over time;
- NEWAH give particular emphasis to building its profile amongst its international donor community; and
- contracts of employment be reviewed and drawn for three to five years on simpler salary scales.

WaterAid UK policy

- Discussions be undertaken within WaterAid UK towards determining its relationship with its 'family' of partners, and
- The long-term relationship of WaterAid with its partners be clarified in the up-coming policy paper 'Working with Partners.'

Programme Management

WaterAid's corporate strategic framework document clearly states that one of its key objectives is to "influence other organisations to adopt WaterAid's approach". Towards this end, WaterAid Nepal currently supports dialogue with key agencies in Nepal, promotes development education and provides technical advice.

Most of WaterAid's £763,000 annual expenditure is channelled through its local partner, NEWAH. The income of the programme comes from three main sources: WaterAid (48 percent); AFID (SEADD – 31 percent); and UNICEF (21 percent). There is some discretion in that WaterAid Nepal can approve projects locally which fall within agreed cost limits without recourse to WaterAid UK. Generally though, senior staff from Head Office approve the individual budgets for each project. Over the next five years, WaterAid's country strategy anticipates funding up to 80 projects a year totalling growth of about 60 percent.

From a budgeting perspective, each project has two principal components. The engineering aspect sometimes locally referred to as the hardware component consists of water supply and sanitation. The health education and community management side, sometimes referred to as the software component, comprises the second component. Each of three areas has increased over the years but the proportion relating to each area has remained fairly constant. At 82 percent in 1995-96, the water supply side takes by far the largest share of expenditure.

In terms of the project's process and management, NEWAH's Head Office receives 60 baseline and 50 evaluation sets of data each year. The baseline survey measures and records the existing health practices of communities together with information about existing water sources. PRA (Participatory Rural Appraisal) techniques are used in its determination. A small team gather together the would-be-beneficiaries to provide information about the project and explain the procedure.

Simple maps are drawn which plot the number of households, water sources and other resources such as school and health posts. Social divisions within the villages are also sometimes noted. Information is collected about the water sources such as their seasonality, distances from households and journey times to and from the source. In Spring 1997, a morbidity section was to be added, collecting information about the incidence of diarrhoea, conjunctivitis, scabies, ringworm, impetigo and coughs. Final evaluation data is collected after one year. Findings from the evaluation are fed back to the beneficiaries.

At present, the team collects information but does not use its baseline field visits as an opportunity for any educational input. Evaluation questions are currently being revised so that they match and can be compared with the baseline survey more accurately.

Towards improving programme management systems and practises, it is recommended that:

- the project approval system be as simple as possible;
- since there are clear sets of policies, procedures and standards for each of the service areas, managers should have the freedom to exercise judgement locally within the policy framework;
- systematic monitoring and evaluation be developed further to inform future plans and develop a management information system;
- baseline and evaluation findings be compared, village by village, region by region, and nationally and
- NEWAH considers the length of its commitments to village communities.