

# Private Sector Participation in Low Cost Water Well Drilling

Knowledge and Research (KAR) Project R7126

Artisan Business Training Programme, Luwero Diocese  
Water Project

Rwamwanja R  
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**Government of Uganda**  
WES Programme – SIDA/UNICEF  
Poverty Alleviation Fund (PAF)

**DANIDA**

*Danish International Development Assistance*

**DFID**

Department for  
International Development,  
Infrastructure and Urban  
Development Division

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- Mpigi district,
- Mukono district,
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- the four Cranfield MSc students whose findings informed the project at various stages,
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It is our hope that the work which we have started in this short project can continue and build on the foundation provided by the many partners and stakeholders involved.

## BACKGROUND

This report contributes to the findings, implications, and future plans of a project, initiated by Cranfield University (Silsoe, UK) entitled “Private Sector Participation in Low Cost Water Well Drilling”. The project was funded by DFID from July 1998 to June 2001, with additional funding partners (Government of Uganda, DANIDA, SIDA, UNICEF, Water Aid, and an anonymous donor) joining at various stages throughout this three-year period.

The three-year Project had two overall aims:

- to develop, and transfer to the private sector, technology suitable for affordable shallow well construction
- to research the process of technology transfer and the conditions necessary for its success, in the context of rural water source construction

The first aim of the project was addressed through three main objectives or outputs:

- ◆ the design, field testing, and evaluation of a new human-powered drilling rig (the “Pounder rig”)
- ◆ the uptake of the technology by a small number of contractors, and their use of the rig in commercial contracts
- ◆ the establishment of a sustainable means by which the rig and subsequent spare parts will be made available in country

The research aspect of the project used the technology transfer and uptake process as a gateway to action research. The process of developing the technology and introducing it into the private sector, and the concurrent investigation and learning process, were intertwined in such a way that the project informed the research, and the research informed the project. Both benefited.

The overall research question was:

*“what enabling conditions and external actions are necessary to stimulate and strengthen effective rural water supply service delivery by the private sector?”*

## 1. Introduction to Luwero Diocese Water Project (LDWP)

Luwero Diocese Water Project (LDWP) is being implemented by Luwero Diocese in partnership with Busoga Trust (BT) and funded by the Department for International Development (DFID).

Luwero district (and Diocese) is situated at the very centre of Uganda. Luwero was the district most devastated by the people's protracted war of liberation of 1971-86. The war had a negative impact on all economic and social activities and infrastructure including destruction of community water sources. There are many single parent families as well as child-headed households. The 1991 census gave the total population as 449,200. Population growth since has been estimated as at 2.5%. There is a high level of poverty among the population. Coffee had been and remains the major source of income, with the war, most coffee gardens were left to waste. Most households remain with no means of earning any income and only survive on subsistence farming.

In 1994 there were only two hand-dug wells in Luwero district, 600 boreholes and 48 protected springs. The breakdown rate has been high such that as of 1996, there were less than 250 safe water sources for a population of 460,000 people. It was estimated that 75% of the population had no access to safe water. In 1992, BT and Luwero Diocese agreed on a partnership for BT to extend its services of developing community water sources to Luwero. This was effected when BT obtained funding from DFID to implement the LDWP. To date, other organisations involved in improving accessibility to safe water in the district include the GoU / UNICEF Water and Environmental Sanitation Programme (WES), Plan International, AMREF, and UWESO.

The project goal is summarised in the Project Logical Framework as to improve health and quality of life especially for women and children in Luwero District. The project outputs include:

- Improved local community capacity to manage, monitor the use of water facilities established, and fund any on-going maintenance.
- Improvements in the quality and quantity of water for communities.
- Improved health awareness among communities on hygienic practices related to water-borne and water-washed diseases.
- Establishing a participatory monitoring and evaluation system.

According to the project evaluation report, the project has achieved its purpose of providing improved quality and quantity of water available to the population in Luwero.

- 104 new hand-dug wells, 2 protected springs and 1 rain-catchment have been constructed to serve a population of more than 25,525 people.
- 89% of the constructed wells have been tested and water was found safe for drinking as defined by international standards.
- 111 water source management committees have been established, 98 at water user group level and 13 at cluster level.

- 12 hand pump mechanics have been trained and equipped and hand pumps are being maintained with 96% of the water sources having signed maintenance agreements with pump mechanics.
- Communities have received health, hygiene and sanitation information while 54 primary schools classes have been taught basic health, hygiene and sanitation.
- Participatory monitoring activities are being established.
- Initiatives have been undertaken to train Artisans.

The Low Cost Drilling project wishes to draw from the lessons learnt from the Artisan Training Programme for the project's Business Development Phase. The rest of this report focuses on the Artisan Training and is based on information as obtained from the Artisans who participate in the training, the Trainer and the Project Management.

## **2. Background to the Training**

The idea to train Artisans in Business Management came from the Project Management rather than the Artisans themselves (supply rather than demand driven). DFID was stopping funding of the project and other avenues of income for the project staff had to be investigated. One such avenue was thought to be contracting out technical teams to other NGOs and others willing to pay for the services. Contracting required a great understanding of commercialisation which the course promised. There was at the same time a desire on the part of the project to prepare the technical staff to go private such that skills learnt while working for the project are not lost.

## **3. The participants**

### *3.1 Attendance*

A total of 29 participants attended the training. Four female and 25 male. Although the course was planned for the technical team, other related positions were invited to participate. Participants therefore included Office Managers and technicians. Because the language of instruction was Liganda, non-Luganda speakers were unable to attend. Participation was through selection by Project Management.

### *3.2 Prior knowledge*

A couple of participants had some knowledge on business but not to a professional level. To the majority the training was an eye opener.

## **4. Funding**

The workshop was funded from the training budget for LDWP. Project funding initially came from DFID. Participants were not expected to make any contributions. The project catered for all workshop costs including stationery. Participants were paid for their time as they normally were at the end of the month. There was no sponsorship or any participants from other organisations.

## 5. The training

The venue for the training was Luwero Vocational Centre, a facility of Luwero Diocese. Only 5 of the participants were residents.

### 5.1 Content

Subjects covered included the following:

- Time Management
- Business introduction
- Marketing
- Business units
- Business expansion
- Book keeping
- Costing / pricing
- Feasibility studies
- Entrepreneurship
- Decision making
- Salesmanship
- Banking
- Business expansion

According to the participants, highlights included discussions on banking, marketing and book keeping.

### 5.2 Duration

The workshop was for 12 days, two of which were spent on field visits. The workshop ran from 8.00 am. to 4.00 pm.

### 5.3 Training methods

Training methods included:

- Lectures
- Group discussions
- Questions and answers
- Field visits

Hand outs were also provided.

### 5.4 Problems associated with the training

Major problems included the following:

- Home-based problems which distracted the concentration of participants including late coming.
- Differences in the educational background of the participants and the varied levels of conceptualization.
- Latent fear that after training, some technicians would leave the organisation and join other organisations.

## **6. Those who gained from the course**

The participants who obtained new information related to business management and improved their skills and had change of attitude towards issues like time management and self presentation. Household management was thought to have improved after training.

- The participants who have developed a sense of saving with the objective of raising some money of their own to start businesses.
- The participants who realised that there is strength in numbers and have formed an association to cater for both business enterprise and individual welfare.
- The participants' families for the increased family savings.
- The Project Management as a result of improved skills from the trainees, especially in the area of time management. Trainees now have a willingness to do more than a single task during routine work. New tasks are now seen in the light of learning new organisation skills and enriching oneself rather than punishment, as thought of before training.
- The facilitator who gained new experience in interacting with a water sector related organisation and participants.
- The Luwero Diocese, as those trained were expected to train others in their respective archdeaconries.
- The Ugandan Water Sector as the training created more potential for private sector development in water source development. This training was thought to be the first of its kind in the country.

## **7. Those who lost as a result of the course**

There do not seem to be any losers. However the project may lose, as some of its highly skilled workers may opt to go private and leave project employment.

## **8. Post-training observations**

The Project Management is optimistic that changes will be forthcoming when there are outside contracts. However, the Artisans have a rather pessimistic attitude and they gave the following reasons.

- Having had them trained, the project has not freed them to engage in private work. As a result, the Artisans have not been able to market themselves and find contract deals with potential clients.
- Most of the communities (including institutions) have been cultured into receiving free things, especially in Luwero, where many NGOs operate. The feeling of "we fought" during the war that brought the current government into power also undercuts the self-help initiatives, consequently there are not so many clients who are willing to involve the private sector in water source development.

- There are still many NGOs (like the LDWP itself) to whom potential clients would go to request for water source development rather than deal with private individuals or groups that would be more expensive.
- There has not been any further provision for support in the form of capital investment. There are plenty of ideas, but without capital not much can be done.

## **9. How the training could have been improved**

- More time should have been allocated to the training.
- By involving project management who could have been supportive after the training.
- By conducting an initial training needs assessment.

## **10 Issues for consideration by the Low Cost Drilling Project**

Following the Luwero experience a number of questions do arise which the Low Cost Drilling project needs to address. Some of these questions are outlined hereunder.

- Who is the project training? The technical person (out in the field doing technical work) or the business manager who seeks and manages contracts or both? Do we need separate training for the two categories? If there is special training for the technicians (drilling), are there opportunities for training in other simple water technologies (spring protection, rainwater harvesting)?
- What is the optimum number of participants at a single raining? How will they be selected? Will there be applications to participate as expression of interest? How can the project create demand for the training?
- Will the training be residential, given the associated costs or non-residential, given the problems of absenteeism and late-coming with non-residential training?
- Will the training be wholly financed by the project, or will there be some contributions from the business organisation (given that they are being assisted to build their potential to make money)? In what ways would the participants contribute (transport, meals, tuition, accommodation)? If the greater part of funding is from the project, how sustainable will be the business training initiative under the project?
- Need the project to conduct a training needs assessment to determine the knowledge base of the persons to be trained, or is the information currently being collected by the project sufficient guide on the training needs.
- Will the training be block training, or will it be conducted in phases? If phases, how many? What will be the content of each phase? Will there be exams, failures and passes? Will certificates be given?
- Will the training deal with business issues per se, or will there be a component of issues related to dealing with potential clients (communities, NGOs, Local Authorities)?

- What are the follow-up support plans?

There may not be ready answers to these and other questions, however the project needs to find time to address them.