



## Sustainability in WES — RUWASA experience

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THE OVERALL OBJECTIVE of the RUWASA project is to improve the quality of life in the project area through a sustainable reduction in water related diseases by the provision of clean water, promoting sanitation facilities and hygienic practices. The strategies to ensure sustainability include the following: Promoting community participation and sense of ownership; promoting the role of women; using affordable and maintainable technologies; promotion of hygiene education and sanitation; and monitoring and on-going evaluation. The population in the project area is about 4m. The project implementation started in 1991 and is expected to last for 10 years. The estimated project cost is about 75 m USD.

The paper presents a few of the RUWASA experiences. The extent to which the strategies have been successful to date are discussed. The lessons are intended to be utilised to give guidance to future development work, especially in the water and sanitation sector.

**Community mobilisation** objective is to ensure that community members are motivated and involved whenever possible in planning, implementation, and operation and maintenance stages of the project. It is a prerequisite for developing the sense of ownership which is necessary for sustainability.

Mobilisation covers activities from district to village level. There are 38 detailed steps to be undertaken. The major activities are formation and training of committees, purchasing and installation of sanplat, hygiene education, site selection, and appointment and training of a caretaker and some basic training in O&M.

Initially too little time and too few resources were spent on testing and refining the strategy. Most effort was put into meeting physical targets. In 1991 and 1992, mobilisation was a bottleneck with regard to following the implementation schedule. By 1993 a sound balance between community mobilisation and construction had been developed. The improvement was due to stopping expansion into new districts, strengthening field supervision and developing an attitude of a more analytical and action oriented approach to problem identification and solution.

The main mobilisation problems experienced were: people do not come, or come late, for community meetings; false expectations of the community; poor communications by mobiliser and/or technical teams; and uncooperative leaders. A participatory/need-based and consumer oriented approach by mobilisers has been fostered. Participatory training and project support communica-

tion using different media (Radio, Print and Drama) has been introduced. Technical teams have been given short courses on communication, importance of mobilization and knowledge of basic hygiene messages. Intersectoral collaboration including task groups have been introduced to promote integration. The trained community committees have been encouraged to carry out mobilisation.

**Human resource development (HRD)** has been aimed at the development, implementation and evaluation of all project-related training of village/user committees, water source caretakers, handpump mechanics, social mobilisers, local government officials and project-related training of staff. There has been no national training institutions devoted to the sector.

HRD approach has included identification of training need, design of courses, preparation of materials, conducting training for the target groups and monitoring and evaluation of training. Job descriptions and performance indicators for all project staff have been defined.

By the end of 1994, about 3400 committees (97% at village level), 4100 caretakers, and 100 hand pump mechanics had been trained. Beneficial activities include:

- reporting system for assessing and developing senior staff capabilities and exposing the staff in charge of the HRD unit to courses have been setup;
- Monitoring and evaluation of training through observation and analysis of course implementation through tests, questionnaire and discussions with the aim of improving the course content is being carried out.
- Since late 1993 participatory method, have been used with success. They foster group discussion in the community/participants, stimulate participation, create a high level of personal involvement in decision-making, and help people to develop self-confidence and the commitment which will ensure a sustained and responsible community effort.

### Technical assistance

It was recognised during the project planning (1990) that the Government of Uganda (GOU) staff were professionally interested and had a good academic background, but lacked practical experience due to the few projects implemented over the last 20 years. 342.4 man — months (mm) in total was envisaged at the planning phase for the first 5 year period worth about 4 million US\$, (12% of the project cost).

The aim of the advisory input was to develop the capacity and technical competence of the GOU staff to the point where they can implement this and similar projects without external advisory input. Subsequently, the advisory inputs were planned such that there would be a gradual reduction; 89 mm in year 1 and 13 mm in year 10. By 1995, the full time advisory input is 12 mm plus 5 mm for short-term input.

The job descriptions of advisers who were to work with national officers, were matched bearing in mind that the advisers will be phased out as national staff achieved greater competency. Later (1992) performance indicators were incorporated in the job descriptions to facilitate the process of evaluating on-the-job training and the need for supplementary training.

The skills transfer assessment based on job description has given a positive impression in nearly all cases. The capacity built can also be reflected by the demand for the project staff for other jobs/promotion. At least 10 key staff have gone to or turned down offers of promotion or more senior positions elsewhere.

The reduced advisory input 89 mm year 1 to 17 mm in year 5 is also an indicator. The population served with water in 1991 was about 88,000 using about 2 million US\$. In 1995 219,000 people are expected to be served with a budget of about 5.7 million US\$. The lessons learnt include the following;

- the attitude of the donor that implementation should be by Ugandans who should be given the opportunity, and expatriates to advise has been useful;
- the job descriptions and assessment of skills transfer is useful;
- initially, advisers should assist counterparts in the executive duties of planning and implementation and gradually move to monitoring and advising;
- there is no easy solution to the issue of effective withdrawal of advisers. The target should be to get the local counterparts independent as soon as possible. Clear terms of reference especially for short-term advisers are important. Matching job descriptions have been found useful;
- one has to be conscious of a tendency to believe that problems can be solved only by expatriates, as this inhibits the local initiatives and promotes the dependency syndrome;
- it is not easy to combine African management culture with management in terms of the west/developed world as management styles are natural results of a society's traditions and social structure;
- it is important for the staff to be hard working and committed. Keeping with routine demands is difficult enough, learning new techniques, working fast, plus quality assuring and monitoring the effectiveness of the interventions at the same time as doing routine work is additionally demanding; and

- close attention needs to be put to the development of coordination, planning, quality control, customer care, instilling quality approach and monitoring.

The **household coverage of latrines** (mainly unimproved) prior to project implementation was on average 30%. The Project target is to reach an average of 70% coverage. Little attention had been paid to planning of an implementation strategy during the planning/pilot phase (1990 - 1991) .

There has been demand and community interest for installation of water supplies but hardly any interest in sanitary facilities. It was decided to test an implementation strategy where sanitation was made a conditionality for getting water (sanitation before water strategy) illustrated in 4 main steps as follows:- Promotion; Sanitation; Water; and Hygiene Education. All community leaders must have installed a sanplat, (revised in 1993 to 70%) and a 10% increase in household latrine coverage in the community was required before construction of water sources started.

The strategy seems to have been effective. In areas where it has been applied, 85% of the households have latrines. The surveys done show that the purchased sanplats are not only installed but also in use. By end of 1994, 81,000 sanplats had been sold, 93% of the target. The precondition also generated competition between Sub-counties, as leaders/communities would like to see their area served first. The ethics of this strategy for sanitation implementation could be questioned but the communities had come to take it "as water is a reward for sanitation".

This approach is possible if the number of sources to be provided are significant, (in this case increasing coverage from below 20% to 70%). The existing bye-laws (not being enforced) which necessitate every household to have a latrine made this approach possible. There is, however, need for an intensive Hygiene Education Campaign to ensure continued use of the facilities.

**Hygiene education** was originally carried out through community meetings and training. The effect assessed to be insignificant. A survey to reveal sanitary practice and the level of knowledge of the links between water and health in the communities was carried out. The study enabled the project to be more specific in designing the contents of its intervention in the field of hygiene education. Only 5% of the adults and older children washed their hands after latrine use in the home, and at school 20% of the children were reported to wash hands after latrine use. The knowledge of disease transfer was very high (more than 80%) but actual hygienic practices were alarmingly low. Based on the findings, the project has stepped up emphasis on hygiene education throughout its activities. Key hygiene messages, based on in-depth studies have been designed, and are used during mobilization. Drama and radio are now also used in message

delivery and this seems to be very successful. The participatory methodology of training especially at community level is also effective. Because behaviour change takes a long time, and a very consistent education is necessary to effect change of attitude and behaviour, it will be very difficult to see impacts for some time to come. The challenge is how to have continuous hygiene education message delivery at the village level. Use of The Water User Committees and the Community Health Workers is being considered for carrying out this task. More effort needs to be put in the primary school programme to strengthen the school Health Education Programme, especially the practical part of it.

### Technical aspects

The total number of sources constructed since 1991 to December 1994 was 2,680, expected to benefit 540,000 people. The technologies used in order of priority were spring protection, borehole rehabilitation, hand augured wells and hand dug wells, and deep boreholes. The order of prioritization is based on least cost (capital and O&M), ease of maintenance, and maximum community contribution. Other activities include hydrofracturing intended to improve low yielding (less than 700 l/hr) deep wells; pump testing (to determine the yield and the required pump installation depth); water quality tests (to establish suitability for human consumption), casting and handpump installation on wells.

The major lessons include the following:

- Although the intention is that the construction teams prepare workplans and coordinate with mobilisers, this has not always been the case. Joint task forces, and constant reminders have had to be made;
- The technologies requiring intensive community contribution should be done first before borehole drilling is started in an area;
- The bacteriological water quality standards have to be reviewed (taking into account the level of development and resources available), otherwise over 50% of the springs and shallow wells do not meet the WHO/GOU standard of *OE-coli* counts per 100 ml;
- It is difficult to reconcile the community preferred sites and the hydrogeologically suitable sites. Communication skills of the hydrogeologists had to be improved and explanations given to the communities about the limitations beforehand;
- 75% of low yielding boreholes have been hydrofractured with success (both screened and unscreened wells);
- It may not be cost effective to rehabilitate boreholes which are more than 15 years old; and the potential for springs and shallow wells needs to be carefully established otherwise it can lead to false expectations. Springs for protection should be identified at the end of the dry season.

Through **monitoring and on-going evaluation**, track on all project activities has been kept and analysis of their continued relevancy, efficiency and effectiveness made. The areas covered include the following:

- Number of sources functioning (on average 90%);
- water quality problems - (mainly due to corrosion of galvanised iron rising mains, 2%; salty 4%) and water quantity problems;
- water sources defects summary - Fences, stagnant water dirty surroundings, drainage. Spring areas maintenance is poorer than boreholes (on average 60% worse);
- household hygiene and sanitation follow-up by visiting homes (latrine and sanplat coverage, use of facilities, home environment);
- and in-depth studies which have looked into water use and consumption, latrine use and maintenance, Radio programme, Pre-implementation and during construction surveys and impact of RUWASA project or women workload. The key findings from areas of project implementation include poor water handling of water from sources to the time of consumption, there is knowledge about good hygienic behaviour but practices are very poor (70% of the cases); 98% of the households use water from the protected sources, average walking distance is 750 m; suspected cultural beliefs sometimes used to explain the non-use of latrines were found to be insignificant and not affecting the use of latrines.

The visits by the technical coordinator (from the headquarters of the consulting firm providing advisers) and the Annual Government of Uganda/Danida Review Missions have been useful in fine tuning project implementation.

The **community based maintenance and managed system** is geared towards the realisation of effective community capability to independently and willingly look after facilities provided so as to enhance long term utilization of such facilities for their good health. The main philosophy behind this strategy is community self-reliance, which ensures ownership, responsible use and sustainability. Preventive maintenance is emphasised as contrasted to repair after breakdown. There has been a lot of changes in the system over the years, aimed at enhancing sustainability and taking into account experiences. It is important that O&M is continuously reviewed. There is need for flexibility.

### Conclusion

Water and Sanitation facilities and hygiene education awareness has been established. The facilities are being used. To ensure continued use, monitoring and further support to OVUM and hygiene behaviour change need to be continued for at least five years.

The best way of building capacity is to give people a chance to implement and be responsible for facilities. Experience is largely based on making mistakes. Experience leads to wisdom. Tailor made workshops and seminars and exchange visits are also useful.

There is need to have flexible implementation, to accommodate change which is inevitable if improvements are to be made.

It is very easy to have a project document outlining and emphasizing integration mobilisations, hygiene education, O&M, sanitation, and women involvement. It is very difficult to translate this theory into practice. Indicators need to be constantly used to check on what is actually happening on the ground.