



Organisational exit strategies for water supplies

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This paper presents the conclusions of a two-year project to collect and collate data on sustainable rural water systems. It describes in brief the methodology, referring to last years interim paper presented at the WEDC conference. The paper describes how a careful exit strategies can make up for emergency entry strategies and makes practical suggestions for essential components to any exit strategy. The suggestions are informed by field data gathered from three partners in Mozambique and Malawi. It shows that technical competence is a key factor in longer term sustainability. While social mobilisation is desirable for long term development, it's influence on availability of water is not as key as "competence". It emphasises the importance of even the smallest involvement during the start-up phase and draws attention to this for future emergency planning. The paper describes the role of spare part supply chains and second level repair agents. The paper concludes by presenting a summary of the key factors agencies should consider when planning an exit strategy.

Introduction

Can an external agency working in an emergency or rehabilitation programme leave a **locally sustainable system**?

The paper presented at the 25th WEDC conference (Batchelor et al 1999) described a DFID funded interagency research project that investigated this key question. The project undertook a thematic comparison of three case studies in Africa. This was for the practical objective of **identifying common elements of a successful exit strategy** for programmes that have introduced new or rehabilitated water supplies.

Each partner started with an emergency response to water needs, and evolved during the following years to a

more "developmental" approach. The gradual shift on all programmes has been:-

- a growing emphasis on community level pump maintenance;
- increasing levels of cost recovery; and
- greater involvement of the private sector.

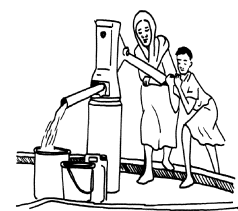
These differences of entry (pre-installation) and exit (post-installation) strategies have allowed the research project to investigate the relative importance of various elements in the strategies towards creating local sustainability.

"Sustainability is the capacity to maintain service and benefits both at the community and agency levels even after external agencies (i.e. NGOs) "special assistance" (managerial, financial and technical) have been phased out."

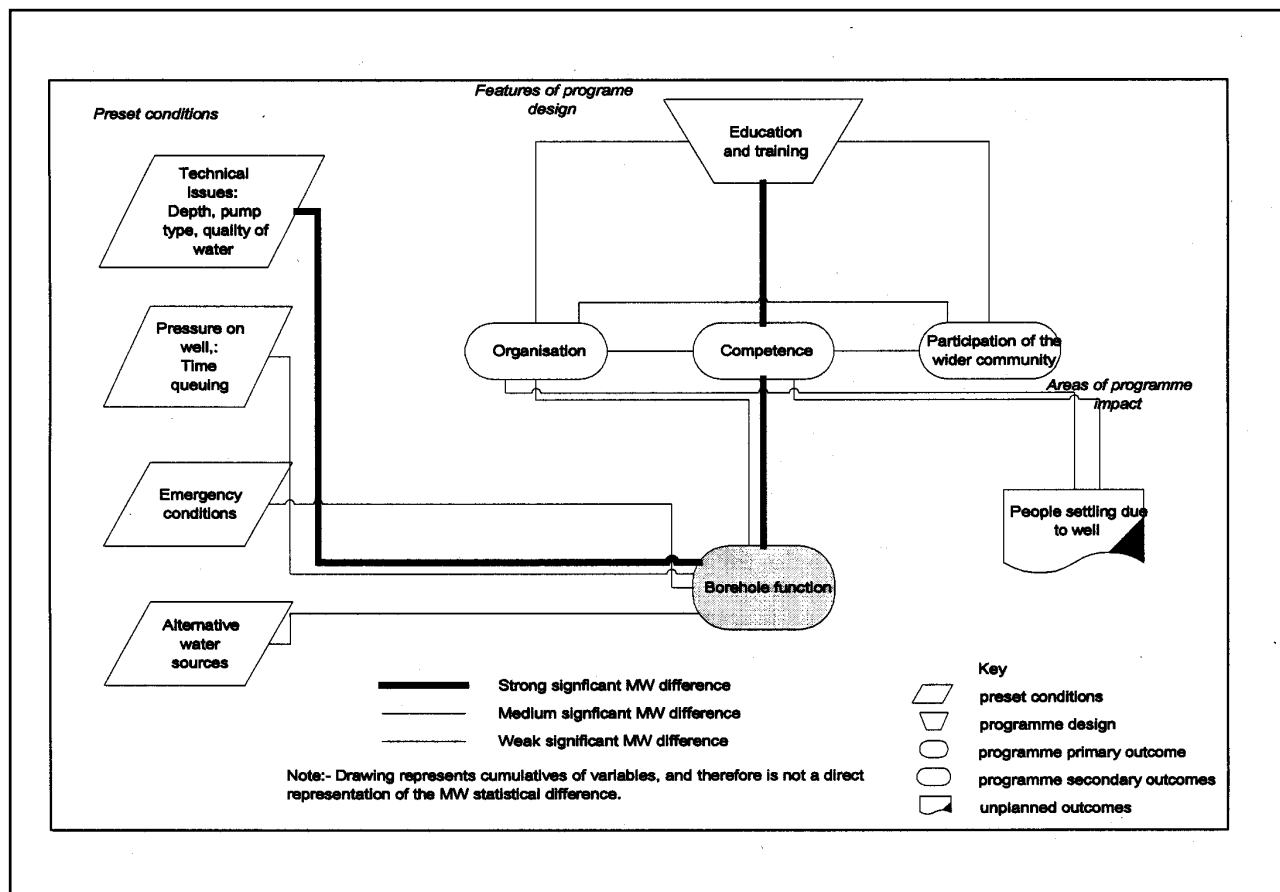
(Concern Universal 1996)

Methodology

In each case about 15 village communities were visited. For each community there were both focus groups discussions and individual interviews resulting in a total of 305 useable responses (average of 7 per community). One of the distinctives of this project was its particular use and combination of qualitative and quantitative data. Interviews were kept as open discussions allowing the communities to define the important factors alongside the framework created from the literature.



Organisation	Care	World Relief	Concern Universal
Country	Mozambique	Mozambique	Malawi
Province/Area	Inhambane	Gaza	Central and Southern
No of wells	170	163	172
Start date	1993	1993	1992
Average depth	60m	63m	53m
Average dynamic water level	50m	46m	35m



The data from the pump user and key informant interviews and observations, were coded and statistically analysed. Given the nature of the data, non-parametric tests were applied to identify possible relationships, i.e. Mann-Whitney test for significant differences, and Spearman’s correlations. These relationships were then used to highlight those important links to pump availability and ownership. These relationships were further investigated using the qualitative data gathered during the interviews.

Findings

The drawing above presents the main relationships highlighted by the data. Findings are primarily presented based on an analysis of the impact of key social contextual and community organisational issues (Village Level Operation and Maintenance variables) on the sustainable availability of water from the borehole. “Borehole Function” is a mix of the time a pump is broken (downtime) is the cumulative effect of the possible delays and the frequency of breakage which is as the variable suggests - the number of times the pump breaks down in a given period. Downtime and Frequency of Breakage are regularly monitored in water projects. In this project the methodology allowed the analysis to investigate these variables in relation to the social and community issues.

The drawing presents a summary of the main relationships flagged by the data. On these non parametric variables it is not possible to merge these data statistically. However, for

the sake of presentation, the variables have been lumped together and a qualitative mean taken for each grouping. The result is a diagram that presents the main relationships found in the study.

We realise the following is controversial but in summary, the data suggests that where a local community has been mobilised to repair their own pump, the downtime is reduced (compared to a more central approach) but the frequency of breakage increases. Thus the total availability of the pump is not necessarily increased by localisation of the repair process.

It was confidence in local technical competence that was found to have the strongest relationship with the sustainability of the system. “Competence” was based on a combination of the technical training of the person repairing the pump and the perceived competence of that person (or persons) by the community. Perceptions were related to the more quantitative data of level or training, time taken training, etc. If there is “competence” in the locality (either within the community or nearby, eg possibly a private area mechanic) then the availability of the pump improves (minimal downtimes and low frequency of breakage). Participation of the wider community and community organisation both contribute to competence but are not the defining factors. Good technical training is necessary to create sustainable systems.

Another defining element to the process of repairing the pump is the availability of spares. The agencies concerned

have been developing a private enterprise supply chain. The combination of these private chain initiatives and the “leftover” spares originally supplied during the emergencies, has meant that spares availability has not a significant problem for the communities. The findings show that “spares availability” is not a significant delaying factor in the repair process. However, this may not represent the longer term. Private suppliers do not seem to be making sufficient profit from the spares to motivate them and are currently selling spares as a community service. This may or may not be sufficient motivation for them for the long term. We would encourage agencies to allow retailers a greater handling charge on the small items of pumps for more commercial profit margins.

Having placed greater emphasis on local technical competence for pump sustainability, we acknowledge that social mobilisation is valuable in itself as a prelude to community problem solving and future development activities. The literature also suggests that the social mobilisation has considerable value for long term health benefits. The data collected shows that increased social mobilisation tends to lead to greater care of the wellhead, which may be an indicator of hygiene awareness. The data also shows that **rules and sanctions** set by a water committee do not encourage care of the wellhead. Those communities with less rules actually show a greater care and ownership for their pump. The results seem to indicate that dialogue and understanding are more important than legislation.

The data demonstrates that even the simplest of involvements in the installation of a pump generates a greater sense of ownership than otherwise; such as provision of materials or working on the road. Even during rapid emergency programmes, involvement of the community should be made a priority.

However, the results also suggest that a careful exit strategy can go some way to making up a poor entry strategy. An emphasis on technical training alongside training on management, finance and health, can bring a community to ownership of the pump even after it has been installed. “Competence” will be formed by technical knowledge, which in turn is influenced by the length of training, the level of training and the number of trained mechanics.

“Length of training - frequency of breakage and downtime are both reduced with longer training. More importantly; “emergency” pumps which have had **longer training** tend to have less frequent breakdowns and shorter downtimes than “development” pumps. Ownership was increased with the longer training for emergency pumps and the ownership levels were almost the same for emergency pumps with more than 1 week training and development pumps.”

This statement is made in the report (Batchelor et al 2000) of the sample of Afridev pumps only (Volanta pumps excluded)



Recommendations

It is difficult in such a short paper to describe all the findings of such a project. In this section we attempt to sum up our recommendations from our study:

- Agencies that have been involved with water supplies during emergency or resettlement programmes should have planned exit strategies regardless of their entry strategies. A **planned** exit strategy can enhance sustainability;
- Donor agencies should be prepared to fund follow up work after an emergency or resettlement programme. Strategic inputs to a planned exit strategy can be a cost effective mechanism for creating sustainable water assets in an area;
- Donor agencies should create policies which link departments concerned with emergency work with those for longer term development so that it is clear which department should fund the necessary exit strategies;
- Agencies should note that a key factor in creating a sustainable water supply is to have adequate technical and management competence within the locality. Competence has a greater influence on the total availability of water than the details of community organisation and wider community participation. Limited budget or resources for an exit strategies should be used to enhance technical competence especially if traditional forms of community organisation are effective;
- Agencies wishing to exit an area must acknowledge that some ongoing support is required. Ongoing technical support is required for difficult technical repairs and ongoing institutional support is required to encourage ongoing social mobilisation. Those responsible for water are not necessarily the best local authority or agency for the social mobilisation and other departments such as health or community development should be considered. Agencies should make strategic links and build capacity to leave some form of ongoing support. The private sector is a strong possibility in present day Africa for the technical side of both the supply chain and some form of area mechanic; and
- Regarding the supply chain:- private suppliers should be given the opportunity to make a profit by placing a reasonable handling charge on small items. This supply of spares should not need to be subsidised at any stage

of the long-term process, either as an incentive to the suppliers or to the distributors. The research indicates that communities can raise realistic finance for spares where they are committed to the water supply. Private suppliers with sufficient commercial incentive could also undertake the more complex repairs and become “area mechanics” with good technical competence, thereby providing ongoing technical support to the community. Training by the agency can be offered during the exit process perhaps for a nominal training fee to ensure commitment by the new businesses.

Exit strategies for sustainability should include the following practical elements:-

- Social profiling - to know in advance of potential conflicts within the community;
- Work with existing structures if **they exist**. Encourage participation by women but do not attempt to introduce new democracy¹ - let the village community suggest the most appropriate way of selecting people for training, committees and care-taking;
- Training of the community selected committee in technical, management, financial and health skills with sufficient emphasis on technical skills to ensure a competent repair process;
- Training on the financial mechanisms should leave the community to decide if regular payments is the best mechanism for their community operation and maintenance. (Collecting quotas at the time of breakdown does not tend to delay repairs);
- There is a need to save towards replacement of the system - strategic connections between the community and the financial service sector may need to be made, this will vary based on the country context;
- Training on management should not be dogmatic on the need for rules and sanctions. Rules can discourage ownership by the general community. Training should include discussion of the most appropriate mechanisms to manage the pump;
- Training of as many people as possible (within a community and within budget) in those skills;
- Training of both men and women in all the skills. (Do not reinforce stereotypes);
- Work with the government and other agencies to ensure a supply chain of spares. Preferably the supply chain

should result in spares being available to the community from a local retailer;

- Capacity building of local government or private enterprise, to form a group that can undertake more difficult repairs on an ongoing basis after the agency has exited; and
- Work with local government other than just the Water Department. Health and Community Development (Youth, Gender) workers often have more resources (time and capacity) to visit communities regularly. Agencies should encourage local government workers to encourage communities to sustain their motivation.

The research has identified important factors that make up a good exit strategy that leaves the water point as sustainable as possible within the country context. While **there is no substitute to a good participatory entry strategy**, this gives some hope for retaining the assets of an emergency or resettlement programme beyond the life of the programme and presence of the external agency.

References

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- Concern Universal 1996, Evaluation of the HESP/VLOM Programme, Project document, Concern Universal.

¹ This is again a slightly controversial comment. However we found that where a programme had worked with the existing village authorities or existing village development committee, the borehole function was better than those cases where a new committee was set up.

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