

Executive Summary.

Introduction

Throughout the world well drilling in drought prone areas creates unnatural settlements which have a high dependency on the water supply. A number of agencies in Africa have been working with displaced populations (through conflict or environmental factors) to restart communities in home areas or in new areas. These programmes have involved creating water points which seem to be magnets for returnees. The communities become dependent on the new water supply and are vulnerable to its breakdown. This creates a challenge for leaving locally sustainable systems. Handover of maintenance from the external agency to local communities and local government is often difficult and it is at this point that much of the gains of the agency can be undone. Agencies use a variety of participatory approaches, village level maintenance structures, standardised pumps to fit government recommendations, organisation of spares supply and training of local government teams. This report presents the work of an interagency project funded by the British Government (DFID) which compares and contrasts recent variations on these approaches. The project is undertaking a thematic comparison of three case studies in Africa. This is for the practical objective of identifying common elements of a successful exit strategy for resettlement programmes that have introduced new water supplies.

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

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 relative importance of various elements in the strategies in 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.” (Evaluation of the HESP/VLOM Programme, 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). Interviews were kept as open discussions allowing the communities to define the important factors alongside the framework created from the literature. The data from the pump user and key informant interviews, and observations were coded and entered into computer software for analysis. 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.

Results

Results are 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. The time a pump is broken (downtime) is the cumulative effect of the possible delays. The data is used to investigate each delay and state whether over the whole sample it is a defining element.

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 reliability of the pump is not necessarily increased by localisation of the repair process.

Using the results to investigate social factors, confidence in local technical competence is found to have the strongest relationship with the sustainability of the system. If there is competence in the locality (either within the community or nearby, possibly a private area mechanic) then the reliability of the pump improves (minimal downtimes and low frequency of breakage). Participation of the wider community and 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 the private chain and the spares originally supplied during the emergencies has meant that spares availability is not a significant problem for the communities. The results show that this 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 for the long term. The report encourages agencies to allow retailers a greater handling charge on the small items of pumps.

Having placed greater emphasis on local technical competence, the reports draws attention to the fact that social mobilisation is valuable in itself as a prelude to community problem solving and future development activities. The literature also

suggests that it has considerable value for long term health benefits. The results show that increased social mobilisation tends to lead to greater care of the wellhead, which may be an indicator of hygiene awareness. The results show 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 results demonstrate that even the simplest of involvements in installation of a pump, such as provision of materials or working on the road, generates a greater sense of ownership than otherwise. Even during rapid emergency programmes, involvement of the community should be made a priority. However, the results also suggest that some elements of an 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. 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 of the sample of Afridev pumps only (Volanta pumps excluded)

Key Findings:-

There is a need to balance the training given to include sufficient technical focus. Building the capacity of a committee on subjects such as community mobilisation and mechanisms of community management enhances long term development. However, there is no substitute for technical training. Technical competence influences the sustainability of the pump.

There is also no substitute for getting the community involved early on. Even the simplest of involvement, such as clearing roads or providing materials, enhances the future sense of ownership. To be inclusive in the installation process does not necessarily takes a lot of time and it should be possible for even emergency programmes to be mindful of exit during the entry process.

External agencies as part of their exit strategies should set in place mechanisms for ongoing support. There should be a recognition that communities will need assistance for complex (albeit infrequent) second level repairs. Building the capacity of the private sector or local water institutions to be able to provide this technical support is part of a realistic exit strategy. Community mobilisation for problem solving, including Village Level Operation & Maintenance of the water supply, is a long term process. Communities need long term encouragement to maintain the motivation and develop the skills required for development. Social mobilisation of the communities may (will likely) come from local institutions other than water departments staffed by engineers (eg health and Community services). Local institutions able to provide ongoing social

mobilisation should be identified and enabled to include the water system in their programmes.

Exit strategies

The report gives a number of strategies addressing noted exit issues, based on the framework of concepts developed from the literature and partner interviews. The Table in Section 7 of the main report presents the options that are available to an external agency considering exiting an area.

In addition, the report raises the question of funding exit strategies and of creating a supply chain for spares.

Regarding funding and policy:- The case studies suggest that both funding and implementing agencies working with water supplies and/or having integrated programmes on water, sanitation and health, should not abandon water points that were the outcome of an emergency or resettlement programme. They should work with the local authorities and local communities on a planned exit strategy to turn the water points into sustainable supplies owned and managed by the local population. Exit strategies need not cost a lot of money although the case studies seem to indicate that to stimulate effective ownership of a water supply and to put in place the technical competency required to locally manage a borehole, costs about the same amount as the original hardware of the water supply.

Emergency water supplies are often put in by agencies with considerable sums of money at their immediate disposal (funds raised to save human life in response to the emergency). Development agencies often have a lot less money for disposal. Emergency agencies could put aside an amount equal to the original cost of putting in the hardware for a longer term planned exit strategy.

Regarding the supply chain:- private suppliers should be given the opportunity to make a profit by placing a reasonable handling charge on small items, and not being undermined by free gifts from local government or agencies. 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 finance for spares if they are committed to the water supply. Private suppliers could also undertake the more complex repairs and become “area mechanics” with good technical competence 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.

Recommendations

The report makes the following recommendations

- 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 both the supply chain and some form of area mechanic.
- 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. Do not attempt to introduce new democracy – 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.
- ✓ 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.

Recommended immediate actions

- The current Guidance notes circulating in DFID do not seem to address the overlap between an emergency WS&S programmes, resettlement or rehabilitation, and longer term development WS&S programmes. Guidance notes based on this research should be disseminated to complement and support existing literature.
- If possible, review DFID policies and guidelines surrounding the transition from emergency WS&S programmes to longer term development. This may require a workshop/consultation with relevant stakeholders to discuss the findings and suggest practical administrative changes.
- Guidance notes targeted at different institutions should be generated based on the information in this report, eg a guidance note for national governments experiencing an emergency and for NGOs working with WS for resettlement and development

The research has identified the 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.

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Glossary

Afridev	VLOM pump suitable for manufacture in developing countries.
availability	the probability that equipment will be in operating condition
Care	Care (NGO)
CU	Concern Universal (NGO)
CWSP	Community Water and Sanitation Project
DFID	Department for International Development, UK
Down time	period for which the pump is out of service when it does break down
FAO	Food and Agriculture Organisation of the United Nations
Frequency of breakage	Alternative representation of mean time before failure
GOM	Government of Mozambique
Grameen Bank	Provides credit to the poorest of the poor in rural Bangladesh without any collateral
HESP	Hygiene Education and Sanitation Promotion (Malawi)
HSA	Health Surveillance Assistant (Malawi)
Mk	Malawi currency
Mt	Mozambique currency
MW	Mann-Whitney statistical test
Naira	
NGO	Non Governmental Organisation
O&M	Operation and maintenance
PNA	Politica Nacional de Aguas, National Policy for Water of Mozambique
PRA	Participatory rural appraisal
PRA	Participatory Rural Appraisal
SCF	Save the Children Fund
SCF	Save the Children Fund (NGO)
UNDP	United Nations Development Programme
UNICEF	United nations Childrens Fund
VLOM	Village level Operation and Maintenance
Volanta	Deepwell pump developed in the Netherlands.
WEDC	Water, Engineering and Development Centre, at Loughborough University, UK
WES	Water and Environmental Sanitation
WHO	World Health Organisation
WMA	Water Monitoring Assistant (Malawi)
WR	World Relief
WTP	willingness to pay