



Strengthening sustainability of water supply projects

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SINCE 1994, THE water supply sector in South Africa (SA) has provided over 5 million rural people with access to clean water. While this is a considerable achievement, the pressure to deliver and the *changing institutional environment* in which the sector must now operate have raised new concerns about the sustainability of completed projects. One of these major changes that have occurred in the sector since 1994, has been the establishment of the democratically elected local governments. Furthermore, a number of policy and legislative changes have taken place to enable local government to carry out its functions as the institution primarily responsible for local-level development. Chief amongst these changes has been the promulgation of the Water Services Act (Act 108 of 1997), which rightly transferred the responsibility for provision of water and sanitation services to local government. In this way local government becomes Water Services Authority (WSA), which in turn should function as, or appoint Water Services Provider (WSP). All these changes bring new dynamics in the management, accountability, control and ownership of traditionally community-based managed water supply projects. One of the first things that should happen now is the transfer of these projects to local government.

To address the sustainability challenges, the Mvula Trust¹ introduced a number of initiatives. One of these is the “Strengthening Sustainability Initiative” or the “Revisiting Schemes” as it has often been referred. The “Strengthening Sustainability Initiative” was designed to revisit completed projects as a strategy to support communities’ efforts in promoting sustainability of rural water supply projects. The lessons gained from the “Strengthening Sustainability Initiative” and the experience that Mvula has gained over its past 6 years of existence has been useful in redesigning the new model for the future. The Mvula Trust’s “New Model” as it has commonly been known, emphasises *flexibility, allowing options, appropriate technical design, outcomes and behaviour-change based training, monitoring and evaluation for sustainability, and development of appropriate institutional arrangements which promote effective linkages between all structures*, i.e. linking tap level structures, to village level committee, and to multi-village and/or local government structures.

This paper aims to demonstrate how the Mvula Trust, informed by a Demand Responsive Approach² (DRA) has redesigned its model to strengthen the sustainability of rural water projects.

Lessons from the field – threats and challenges to sustainability of rural water supply projects

As part of the “Strengthening Sustainability Initiative”, the Mvula Trust undertook an evaluation over 60 completed projects. The evaluations were focussed on establishing whether projects are sustainable in terms of cost recovery, local level financial management, O&M, water use and health issues. Areas of weaknesses identified during the evaluation were explored with community members using PHAST (Participatory Hygiene And Sanitation Transformation) methodologies or tools to engage people in analysing their own situation and decide on desired changes.

While the evaluations have generally showed that most projects are functioning in terms water flowing, at the same time there are serious problems threatening their long term sustainability. These are summarised below.

Cost recovery is extremely low, hence many of the projects have continued to function through government subsidies for operation and maintenance. These subsidies have subsequently been withdrawn, leading to total collapse of some of the schemes. The Village Water Committees (VWCs) seems to have generally failed to enforce payment. Other measures to enforce payments such as pre-paid meters have also failed. Pre-paid meters have often led to lower consumption at project level, vandalism and exclusion of the poor from the benefits of improved water supply.

The problem of cost recovery seems also to be a result of poor training in financial management, which tends to focus on training an individual rather than broadening local level financial management capacity. Training has mainly focussed on basic bookkeeping. The capacity of committees to do financial planning, e.g. to recalculate tariffs as required, or how to set up a system of dealing with defaulters has not been developed.

The health impact of new water supply projects has not been realised in most part of the country. Constant breakdowns, contaminated water at tap level and poor O&M are all contributing factors. Further more, it also appears that efforts to link water provision with promoting good health were very minimal, if any. The evaluation results confirmed this. Water quality tests results showed that in most cases water from household storage containers was contaminated.

Communication problems at project level are also undermining project sustainability. Community members have often complained that they do not understand how tariffs are calculated, or how much money is being used in a given month. Poor communication leads to distrust and anxiety at local level. People would not want to pay if they are not sure what their money is used for.

Undoubtedly, communication problems have contributed to persistent conflicts between various role-players. When the roles and responsibilities, and relationships between role-players are not clarified, the result is an on going battle for legitimacy as to who is the champion for local development. The perception of financial reward is also a potential source of conflict, i.e. people cannot just continue to pay money to the VWCs if they are not getting any feedback on how their money is used.

Finally, the evaluations have also shown that poor pre-planning work at village level, delivery and technically oriented water supply programme, and almost non-existent of monitoring and evaluation (M&E) have contributed to sustainability problems in the sector. Furthermore, the Mvula Trust's approach of DRA was poorly applied at project level. Projects were rushed through to meet unreasonable delivery targets, problems left unattended far too long and feasibility studies were initiated and driven by technical consultants who were largely interested in getting work than levelling the ground for long term sustainability of projects.

The institutional and policy changes, as mentioned earlier brought new challenges to the nature and functioning rural water projects. The local government as a WSA is now responsible for provision of water and sanitation services at local level. This means that, for projects already completed, they have to be transferred to local government. The situation at the moment is that many local government structures are reluctant to take over projects that are not "sustainable", as this will deplete their already limited resources. This requires that organisations like Mvula Trust and Department of Water of Affairs and Forestry (DWAF) implement measures to enhance sustainability of already completed projects.

On the positive side, the evaluations have showed that communities can, and are able to implement locally created innovations to manage water supply projects. In a number of schemes where costs recovery is high, we have found that communities have on their own, set up a decentralised system of O&M. They have put in place "tap co-ordinators" who are responsible for O&M needs and cost recovery of a particular tap.

These sustainability problems described above are not unique to South Africa and the water and sanitation sector as a whole can benefit hugely from sharing such experiences. The challenge is to design innovative ways to address them so as to ensure long term sustainability of water supply projects, and thereby ensure that full impact of improved water supply is realised.

Lessons from the field: enhancing prospects for sustainability

By examining factors which have led to both project collapse and more importantly, project success – the Mvula Trust has developed a model for the redevelopment of old projects and the establishment of new ones, which avoids many of the pitfalls of we identified. The model is based on the following key elements:

Participatory development

The term "participation" has become an almost meaningless buzzword over the last decade or so. This is so given that, despite overwhelming consensus on the value of participatory development over top down approach, the reality on the ground is that most development work remains top-down and externally driven.

The Mvula Trust remains convinced that participatory development is key to promoting sustainability of projects. We have learnt that the kind of participation which works best in practice is the one where "all role-players actually believe that people, regardless of age, sex educational background, socio-economic status and history, can actually solve their own problems" (Breslin and Netshiswinzhe, 1999). This implies that participatory programmes are those which fully enable project beneficiaries and other role players to explore, together, options, constraints, trade-offs and competing ideas and strategies before reaching a final decision. This is contrary to the kind of "participation" where plans and decisions are made by key leaders and consultants. In such cases the communities are, if lucky, only informed of the decisions taken on their behalf and this will be referred to as community "participation"

There are those who believe that participatory processes are time consuming. The Mvula Trust's experience, to the contrary, has shown that **fully engaging beneficiaries in decision-making** tends to result in significantly less "time wasted" because conflicts are resolved before they arise, project results are in line with community expectations and desires, and ownership of the project is more deeply felt than those projects which are "expert driven."

The Mvula Trust will continue to create necessary conditions for employing participatory methodologies. To date a number of PHAST³ tools have been developed and/or modified for use by sector practitioners in training and facilitation of various aspects of the project.

Effective communication

To enable beneficiary involvement, the development of means and mechanisms for effective communication and accountability are of paramount importance. Many case studies have indicated the importance of **transparency, consistency, appropriate technology and effective spares networks** in the development and sustainability of schemes – especially as subsidies are reduced. The channels for communicating difficulties with the system need to be easily accessed and clear to all. Transparency in account-

ing for monies raised and spent is a determining factor for on-going payment for services, as is the reliability of that service. Transparent, creative and consistent mechanisms for identifying and supporting the indigent and defaulters are equally important.

Using participatory approaches, the Mvula Trust's approach is to engage local people (users of the systems – and not only the committee) developing appropriate communication systems. The PHAST tool called, "Roles and Responsibilities Analysis" has proved very useful in establishing communication lines between various actors.

Decentralised operation and maintenance (O&M), and cost recovery systems

Through the "Strengthening Sustainability Initiative" and other Mvula Trust programmes, it has become increasingly apparent that **the more localised the control over O&M is, the more effectively the scheme will run.** In a number of communities, tap co-ordinators have been put into place to support the O&M needs of a particular tap and servicing particular households. This person is often responsible for the cost recovery component as well. Mvula's experience – supported by that of practitioners internationally – has been that "effective water collection point maintenance systems lead to rapid responses to localised problems; less downtime due to simple repairs; a greater sense of ownership of water collection points; better water point hygiene; and in many cases lower tariffs for households as the cost of localised O & M is not included in the overall water tariff.

Localised mechanisms for tariff collection are equally important. In many schemes the same "tap co-ordinator" is responsible for both O & M issues and tariff collection. Tariffs collected at a water point are then forwarded to a village committee, then to a multi-village committee and finally to a local government/water service provider. Localising tariff collection in this way jettisons the problems of trust and communication, which undermine projects – especially those in which financial contributions ensure their on-going viability.

Water as an entry point to economic development

In keeping with the principle of more localised control over O&M, experience suggests that **O&M support services should, as much as possible, be linked to the issue of local economic development.** Already the legal requirement exists for local government to assume responsibility for ensuring appropriate water and sanitation schemes; a further benefit to communities would be for CBOs, SMMEs and local NGOs to be engaged in service provision – as Water Service Providers or O&M technicians. In this way, local jobs are created, income remains in local areas, and new models of "private-public partnerships" are encouraged to evolve.

Appropriate institutional arrangements

At this juncture, with new legislation, new local government areas, and, hopefully, a new look at the kinds of

agencies which can and should act as water service providers and O & M support agencies, **clearly defined roles and responsibilities between local (tap-level), village-level and multi-village/local government actors are critical.** In order to ensure effective management, the communications, institutional frameworks and spares networks need to be firmly established, in a way which ensures accountability to both the Water Service Authority (local government) and the users of the service.

"Appropriate" level of service

Developing schemes with an eye towards future consumption based on the identified preferences and desires of communities members wishing to undertake income generating activities or up-grading the scheme to yard connection, rather than planning for Reconstruction and Development Programme⁴ (RDP) minimum standards, has a significant, positive effect on the sustainability of the project. Community members have often expressed a need for a higher level of service than the RDP standard, (and in some cases certain households within a particular area can afford that level of service) but this has been "refused" on the basis that it is against policy. Some communities have subsequent to completion of the scheme, introduced yard connection. The results of that have been adverse in most instances because the schemes were not technically designed to supply that level of service. It evident that we need to explore issues around appropriate level of service with all role-players, particularly the users of the system.

Health and hygiene promotion

Health and hygiene promotion components of water and sanitation supply schemes should focus on **single behaviours which, if changed, will have a positive impact on individual households and the community as a whole.** "Participatory programmes, where local residents identify a health problem to be addressed or behaviour to be modified, have a far greater chance of success than prefabricated, generalised messages designed by project agents and introduced on the belief that 1) the practices promoted are not being done in the village (usually due to ignorance) and/or 2) that if people know something then they will obviously practice it (usually structural and social constraints shape practice)" (Mvula Trust, July 1999).

Monitoring and evaluation (M&E) for sustainability

The sector's almost total lack of appropriate M&E has proven, to date, to be crippling the sector. There is a need to move away from the current M&E systems that are focussed only on targets (how many projects are completed, how many people have been trained, how much money has been spent) to begin to focus on key sustainability issues such as cost recover, maintenance and repair, community involvement, use and functioning of the systems.

It is also time to empower local level structures to collect data, analyse it and take appropriate action without waiting for an outsider to warn them about their problems.

To date, the Mvula Trust has developed a number of M&E checklists, participatory tools, and also field-based M&E systems for use by water committees.

Conclusion

Actualising the lessons and insights described in this paper, within the context of changing institutional roles and responsibilities will be complicated and requires considerable work before such recommendations can become policy. The experience gained from the “Strengthening Sustainability Initiative’ will go a long way in influencing policy development in the sector.

References

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¹ The Mvula Trust is a leading Non-Governmental Organisation in the water and sanitation sector in South Africa.

² “ A strategy that empowers a community to initiate, choose and implement a water supply system that it is willing and able to sustain and that elicits the appropriate response from the sector actors and stakeholders” - Mangochi workshop participants – a regional workshop held in Entebbe, Uganda, 1995.

³ PHAST stands for Participatory Hygiene And Transformation. It is an approach that make use of visual materials to help people in a participatory way to: assess their won knowledge base, visualise a future scenario, analyse constraints to change, plan for change and implement a programme to achieved desired changes.

⁴ The RDP minimum standards of service is a provision of communal standpipe, at a walking distance 200 meters from a household.

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