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Sustainability of community water projects in KwaZulu-Natal

> We may affirm absolutely that nothing great in the world has been accomplished without passion. George Hegel, ***Philosophy of History***

In South Africa there is evidence of a passionate commitment to changing the lives of the rural poor; the question is whether sufficient resources are being provided. For the poorest in the most remote regions of South Africa, the question is whether the fruits of liberation are within their grasp. Water and sanitation delivery is a critical indicator of whether liberation in South Africa has provided freedom to obtain basic needs and to go beyond.

Nowhere is this clearer than in rural areas, which are areas of deprivation and deep poverty, particularly in the former Bantustans, which was regarded under apartheid as labour reservoirs.

Introduction

In South Africa we are currently witnessing a double transition in the delivery of water to rural communities. The first is the transfer to local government, a process which is now well advanced in placing the administration and maintenance of projects in official hands; and secondly, the provision of free basic water, which if successful, will provide 6kl of water per rural household per day – a major improvement.

In the nature of passionate commitment differences are expressed, at times, in sharp debate over the progress of water provision. Some argue that the rural water projects are in a state of collapse, while others believe that things are going well. In the face of such a divergence of opinion it has been important to develop a reasoned approach, based on in-depth fieldwork, to deal with all the quantitative and qualitative issues at stake. A method was evolved which examined the plans, budgets and infrastructure, as well as the qualitative issues of attitudes, institutional development, and social exclusion of the poor in communities.

The research has been oriented to analysing and identifying key problems, and identifying initiatives that would lead to problem solving. Following on the first draft of the research report the Minister of Water Affairs and Forestry asked for visits to be arranged by the HSRC to key problematic projects. He visited key problematic projects on 2 July (Ezingezi and Ntabaskop) and on 31 July (Vulindlela). During these visits there was intense interaction between the Department, local communities, political representatives and municipal officials.

A point about method

All quantitative research involves a reduction of social attitudes and organisation to a set of numbers and researchers have to be careful to have both descriptive and qualitative

assessment to validate results. In the data on projects there are, at times, great divergences over numbers (such as capital costs and population) and these can only be validated through comparative data analysis (which is extremely difficult) or intensive fieldwork.

Yet numbers are critical to the evaluation about effectiveness of projects and to the, at times controversial, debate about delivery.

Main question in research is that there was a reasoned approach and disagreement can take place on the basis of understood and common standards. Attempting to give some precision to the notion of 'working' and 'sustainable'

In the table below the criteria for various categories are spelt out and the typical levels of consumption relating to these types of projects:

'Not working'	**'Working *below* RDP* standard'**	**'Working *at* RDP standard'**	**'Sustainable'**
• No water out of standpipes	• Water out of taps • Not within 200m • Social exclusion	• Within 200m • Socially inclusive • Able to make routine repairs	• Free water; no exclusion • Able to maintain • Intervention by local government
Use of traditional sources	6-10l p.p.p.d.	6-18l p.p.p.d.	Consumption approaches 25l p.p.p.d.
Regulations stipulate 25 litres p.p.p.d. from standpipes at a flow rate of 10 litres per minute			

A stratified random sample was drawn from 113 completed projects in KwaZulu-Natal according to district municipalities. The 23 projects selected constituted a 20% sample of the whole and had a profile similar to that of the total field in terms of range of people served, implementing agents, capital costs, etc.

Results

The research results, which was conducted in late 2002 and early 2003, was reported to the Ministry in March 2003. In addition, ten separate reports were written for district municipalities providing detailed description and analysis of delivery in their areas.

The results provided some good news and some not so good news in terms of progress towards the development goals.

Firstly the good news: Of the 23 projects, 78% were working at one level or another. Following on the research, three out of the five projects that were not working at the time of the fieldwork are now working. This could possibly evidence of a 'research effect' whereby projects sampled tend to get more attention, but more likely of a general deeper engagement by local government officials in the management of schemes.

In addition, the projects in which free basic water is now being provided, there has been a doubling or even trebling of water consumption.

Not so good were the following results: Only 22% of the projects were sustainable on the basis then in existence, namely as standalone projects. More disturbingly, 56% of the projects were either not working or working below the standards laid down by government's Reconstruction and Development Programme (RDP), which is 25l. per day. The latter is a major concern, as in a number of projects there is evidence of social

exclusion, namely in cases where sections of the population are beyond 200m from the water source; where they are unable to access water because they are too poor; or projects which are designed to provide yard connections to only benefit those who can pay the quite high cost of connection.

Another issue seems to be that some projects which are registered as complete are really not complete. It seems these were originally designed to provide for a community in phases, but after the first phase is initiated project funding slows and modifications are made to the original plan. These changes have ended in substantial parts of a community being excluded.

Analysis

In water delivery, as in other programmes of social reform and upliftment, there can be 'inverse equity' whereby the poorest in a community are found to be the last in the queue to benefit. This was found to be the case in a number of schemes where the poorest (those living in rural communities) are still waiting to receive free basic water when urban communities are already served. In a number of projects the better-off members of the community are benefiting while the poorest still use streams.

Impact: health and institutions

The research has had a considerable impact on the implementation of community projects. Preliminary reports have stimulated a review of problematic projects and attracted the attention of both municipal officials and of the Minister to providing solutions.

The impact on the health and wellbeing of communities has been more difficult to calculate. It is deeply disappointing to find that health data is generally not available to provide a review of the impact of clean drinking water on health conditions. What is very clear from calculations made on the Demographic and Health Survey of 1998 that both water and sanitation have an acute effect on child mortality rates:

For those households which do not have piped water the child mortality rate ($_4q_1$) is twice as high (from 11.6 to 27.7); and for those households which do not have flush sanitation the child morality rate ($_4q_1$) is four times as high (from 7.7 to 34.9).

Such statistics give an indication of what could be expected as a health impact of effective delivery, and the narratives from Community Health Workers confirm general health improvement.

There are also considerable increases in wellbeing as the length of time for women to get water for the household is reduced.

Community health workers also report activities such as community gardens resulting from water provision, although this is not a general phenomenon.

Health and hygiene

Unfortunately some of the health results are undermined by evidence of poor hygiene practices in the communities researched.

The cholera 2000/01 was a warning that there were gaps in delivery and vulnerable highlighted in the problems of poorest in accessing clean drinking water.

Generally there was poor hygiene practices reported; as handwashing is not reaching rural population. It seems that the good handwashing practices depend on higher levels of consumption of water.

There were also major problems in the rural population attaining adequate sanitation, at the moment about 15% of the KwaZulu-Natal rural population have (VIPS) Ventilated Improved Privies.

All this calls for rural mobilisation and renewed dedication to a national campaign to provide sanitation and hygiene improvements.

Conclusions

During the period of research a radical change took place in the foundations of sustainability as the transfer of responsibility for DWAF-funded projects took place from to rural local government from rural water committees. This implies greater use of the Equitable Share that, although limited, could make an enormous difference to operations and maintenance of rural schemes.

The KwaZulu-Natal research highlighted issues which need further investigation. It appeared from the data that projects with high capital costs do not seem to serve all members of a community, and that high capital costs are not followed by low operating costs. If this is confirmed in other provinces this does have important conclusions for policy.

It is hoped that the sample will continue to be used as a panel against which to measure changes in sustainability; a database has been constructed and maintained and communications are now well established between researchers, the water committees, and local governments. This is a valuable asset for the region.

In addition HSRC and the researcher is encouraged by the fact that the Minister is committed to seeing that this research is continued to other provinces which would provide a larger sample from which to draw strategic planning conclusions.

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* The Government's Reconstruction and Development Programme (RDP)