

**A STUDY OF CURRENT WATER POLICY IN RELATION
TO RURAL PEOPLE'S EXPERIENCE OF ITS
IMPLEMENTATION - CASE STUDIES FROM THE EASTERN CAPE**

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Report to the Water Research Commission

by

Rural Support Services

**WRC Report No. : 1066/1/00
ISBN 1 86845 678 1**

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EXECUTIVE SUMMARY

Introduction

Rural Support Services (RSS) was commissioned by the Water Research Commission (WRC) to conduct research on the impact of government water policies in rural areas. Eight villages were selected randomly and a questionnaire on households was piloted in four of the villages. What follows is a brief report on the findings of the research study.

The study was undertaken to determine:

- The practical impact of the implementation of government water policies in rural areas. Policies on paper are often different to the way they are implemented. Further, the way people experience policies is sometimes different from what was expected. The aim was to determine the effect of the implementation of these policies in rural areas. All other aims listed are linked to this aim.
- The water services rural people feel they really need, including the level of service. Do current policies meet people's needs and what are people's perceptions regarding levels of service and the affordability of various service levels?
- The level of water services rural people feel they can afford and wish to pay for. How do people experience the current systems and what is the level of payment for such services?
- How government water policies are put into practice in rural areas. It aimed to create a practical picture of the impact of government policies on rural people - for example, the social impact of different levels of service.
- The extent to which people use the constructed infrastructure as well as actual usage. The use of infrastructure can serve as an indicator as to whether the original project has fulfilled its objective. There is evidence that people use some infrastructure only in times of need and it is important to determine the actual usage of such infrastructure.
- The level of community operation and maintenance. This is crucial for the sustainability of water supply. The issue of who owns the system - who is ultimately responsible for maintaining the system - is also covered.
- Recommendations for solutions for all of the above, where applicable. Recommended solutions in terms of the above aims are put forward by communities, the research team, and other implementing agents.

Literature Review

According to Water Affairs Minister Ronnie Kasrils, there are more than eight million people in rural areas who do not have access to clean water. He said that the original date projected for the fulfilment of DWAF's water services target - the year 2007 - might be unrealistic. If DWAF continues at its present rate, it could take twenty rather than seven years to reach its goal.

An examination of key principles followed in relation to service provision and the variety of post-apartheid housing and infrastructure policies, concludes that the "lifeline" price of water is now seen as being equivalent to the operating and maintenance expenses. DWAF's approach is seen to have moved away from the entitlement to water as spelt out in the Constitution and from the mechanism of financing this entitlement as spelt out in the RDP. It is likely that, given current municipal infrastructure policy, nearly 30% of urban residents will be subject to low standards (pit latrines, communal standpipes, a weak electricity supply, gravel roads, open storm-water drains and communal waste dumps) after ten years. 70% of the rural population will have these same "basic" services after a decade and 20% no services at all. Subsidies are inadequate to cover the service levels proposed by the RDP. Instead, the approach adopted emphasises cost recovery and "limited" local-level cross-subsidies.

While DWAF had, by year-end 1998, served three million people, mainly in rural areas, with new water connections, the sustainability of these water projects is questioned. Breakdowns of schemes and cut-offs continue to be a problem. The insistence on charging the full operating and maintenance costs is traced to the "some for all, not all for some" approach of *the Water and Sanitation White Paper*. Community water supply projects include communal standpipes at 200 metres and the principle of full payment for the operating, maintenance and replacement costs is insisted on. Once projects have been built, communities do not receive further support.

Studies of the impact of rural water schemes indicate a serious crisis in delivery and a general failure to meet planned targets. Inequities between projects have led to significant levels of community tension and, despite the claim to provide "some to all", vast areas have not received water services to date. The conceptualisation of the national rural community supply initiative is itself called into question.

The study examines the "demand-responsive" approach popularised by the World Bank and other international agencies. It is clear that what this means is that the level of service provided will ultimately depend on what consumers are able to pay. The demand-responsive approach to rural water supply has been influential in South Africa as well. The approach is increasingly seen as a solution to rural water supply problems in this country.

The survey looks at another set of DWAF responses to the crisis of delivery - private sector management assistance, contracting out, concessions and privatisation of infrastructure. In this regard, the researchers question whether the BoTT experiment should be continued as it draws away resources from the priority development area of rural local government capacity building.

The review then sums up the main proposals for improvements in service delivery from the documents studied: the demand-responsive approach; public-community partnerships; community management; training and capacity building.

Materials and Methods

A combination of household interviews, focus groups and individual interviews was chosen for this study. Focus groups and individual follow-up interviews were also used to gather additional data and further clarify conclusions. Representatives from 144 of the 160 households targeted were actually interviewed. Of these, 66.7% were female and 33.3% male. There was an average of 5.8 persons per household interviewed.

Technology transfer and capacity building actions

- Technology-transfer actions
 - ❑ The director of Rural Support Services presented a paper based on this research report at the WISA Biennial Conference at Sun City on 31 May 2000.
 - ❑ A number of the findings of this research report were included in a Rural Development Services network document entitled "Water for All – meeting basic water and sanitation needs, June 2000".
- Capacity building
 - ❑ Rural Support Services field workers were trained in the administering of the questionnaire used for this research.

- ❑ Members of community based project Steering Committees and women's groups were workshopped around the issues raised from the analysis of the questionnaires.

Main Findings of the Research Study

This section presents the findings of the household surveys undertaken in eight villages, based only on questionnaires.

Household demographics

Data presented includes the gender of respondents, two thirds of whom were women. It indicates a high level of unemployment and dependency on pensions, social grants and remittances from migrant workers. Of 144 households, only 38 (26.4%) include a formally employed person. 60.6% of all adults are unemployed.

Sources of water before and after installation of the scheme

Sources of water are examined before and after the installation of the scheme. While a majority of households had no source of clean water prior to 1995, 79.9% of respondents said that they now get their water from a communal tap. 34.7% still get some from a river. Although almost 80% of respondents now get most of their water from a scheme, the 20% who do not, actually represent schemes that are not running at all. In two villages, Lalini (120 households) and Ngqanda (160 households) the schemes were not operational at the time of the survey.

Respondents' recommendations

Key recommendations for improvements included:

- Installation of yard taps (87.5%)
- Metering of individual water use (50.7%)
- Getting all community members to pay for water (52.1%) and
- Getting government to pay the operators (50.7%).

Only 7.6% of respondents favoured pre-payment meters on taps. This may be due to their not being familiar with this system.

Awareness of the Water Services Act

The findings reveal that this is very low in all the villages with only 9% of all respondents saying they are aware of it. This may be due to the fact that almost all the projects were implemented before the Act was in place and the debate around it finalised.

Further investigation of responses to the household surveys

Responses to the household surveys were taken to village focus groups and to service providers, local authorities and DWAF for more detailed clarification.

Conclusions and recommendations

Conclusions

The following conclusions are based on the findings of the various information-gathering activities that made up this study.

Demand-responsive and supply-oriented approaches

There are two distinct approaches to the problem of rural water supply. The first - the "demand-responsive" approach - is put forward by a number of agencies as well as government. This implies that consumers should only get the quantity of water that they can afford. The alternative, the "supply-oriented" approach - installation of a basic minimum standard of services across the board - is also a more centrally directed one.

Our research indicates that the demand-responsive approach may not be appropriate in a rural situation. While a demand for higher levels of service is commonly expressed, people do not generally consider such service levels in relation to their ability to pay. The demand-responsive approach thus often creates expectations that cannot be met.

A key danger of the demand-responsive approach is the implication that the poorest rural communities will be forced to put up with standards based on "demand" - what they are able to afford. The consequence of this may be the persistence of minimal and often inadequate service standards in many rural areas.

Sources of water

The installation of the schemes has in most cases resulted in a major shift in where people obtain their water. Some 80% now state that they obtain it from a communal tap, although the amount allowed for (25 litres per person per day) in government policy is not always available. This should result in a significant improvement in quality of life for those affected as they now have a safe, relatively convenient source of water for domestic use.

The schemes are however not impacting on the remaining 20% who are still forced to obtain water from springs or rivers which are some way away and in all likelihood, unsafe for human consumption. This 20% in fact includes two entire villages where schemes have collapsed or work only intermittently. A 20% failure rate for these schemes, the fact that this 20% represents two whole villages, and the attendant threat to public health, clearly warrant urgent investigation and remedial action by the relevant authorities.

Non-functioning schemes

Our research indicates that reasons for the non-functioning of water schemes are mainly local political disputes and the way in which the schemes were introduced into the community in the first place. Apparent technical problems often have their origins in these disputes, while in other cases, the scheme lacks legitimacy because the community feels it was imposed on them. For a substantial minority, this has led to ongoing operational problems as members of some communities have no sense of ownership and fail to take responsibility for water supply.

A supply of 25 litres per person per day

While an overwhelming majority agree that it is now easier to get water, about 55% state that the agreed daily allowance of 25 litres is not always available from communal taps. Most (77%) feel that 25 litres per person per day is sufficient for their daily needs. This should however be understood relative to what people have been accustomed to up to now. It is also unlikely that people are aware of the link between health and sufficient clean water. Even the 25 litre minimum is inadequate for a healthy existence. A minimum of 50 litres per person per day is in fact internationally recognised as the Basic Water Requirement (BWR) for Fundamental Human Needs.

Unemployment and dependency on grants and pensions

The research showed that there is very little employment available in the Eastern Cape rural villages surveyed. Overall unemployment statistics indicate that this is probably true for most rural settlements in the Province¹. This results in overwhelming dependence on pensions and social grants as well as, to a lesser extent, on remittances from migrant workers. Lack of employment opportunities and resultant poverty remain the greatest obstacles to the affordability of water from the schemes. While the majority accept that water costs are low, they may in practice be forced to prioritise their spending on more urgent matters. Responses indicate that poverty also appears to inhibit effective community participation in water committees.

Contribution of the schemes to local economic development (LED)

National water policy does not clearly take into account the potential impact of rural water schemes on local economic development. Given that rural water projects in many cases represent the only significant development input into rural settlements, this is a serious oversight. Most respondents point out that there is not enough water to permit basic LED or subsistence projects. A major opportunity seems to have been missed to kick-start LED via an allowance of water greater than 25 litres, or even through a free water allowance.

Gender issues

It is clear from this study that women have been key beneficiaries of the new rural water schemes. This is of particular importance as they bear the main burden of fetching water and domestic work in rural communities. Attitudes to women's participation in water committees also proved largely positive.

A "culture of entitlement"?

The research tends to disprove the prevalence of a "culture of entitlement" in the villages surveyed. The majority of respondents (73%) agree that, in principle, consumers should pay for the water that they use. Similar responses to allied questions indicate that consumers do not expect water for free, while only just over 30% think that water is too expensive. It is however likely that owing to poverty and unemployment, there is a serious affordability problem, which leads people to suggest the introduction of a free water supply. The entitlement notion seems to be further contradicted by responses that indicate that the community is eager to take broader responsibility for the operation and maintenance of the system.

¹ According to a recent report, 74% of the population of the Province live below the poverty line. *Stats show 74% of EC citizens are poor, Daily Dispatch*, 23 May, 2000

Metered yard taps and communal pre-payment meters

A significant majority of those interviewed are prepared to pay more for a yard tap, which is also metered to measure individual consumption. A high proportion of respondents also suggest that government should be prepared to fund this. This seems to indicate general dissatisfaction with the current system of communal taps where there is no control over individual use and a flat rate is charged monthly for consumption. While the higher initial cost of metered yard taps seems to make these an unrealistic option, the longer term advantages for sustainability accruing from better payment of service charges by those with yard taps, might arguably make the initial higher capital outlay worthwhile.

In contrast there is overwhelming opposition to the use of communal pre-payment water meters. Fewer than 10% are in favour of this system. Most respondents are however not familiar with this system and it is likely that very few understand how such a system would operate.

Poverty and payment for water

Respondents are in principle willing to pay for water consumed, but circumstances often make it impossible for them to do so. While a majority expresses its willingness to pay more for metered yard taps, these might, without an additional subsidy, in practice be beyond the means of most households.

Respondents expressed themselves in favour of payment for water on a sliding scale or a rising block tariff. While current government policy seems to lean towards cutting off those who do not pay for services, community members in contrast avoid a punitive approach. In most cases they prefer alternative options such as payment through work on community projects and cross-subsidisation of the very poor. Most villagers support the idea that everyone should have access to water whether or not they can afford it.

Capacity of local government and water committees

Fewer than 20% believe that local government is able to maintain the system and less than a quarter of respondents believe it should play this role. Community responses indicate that an overwhelming majority are confident that water committees were trained and are able to operate and maintain the system. There are however villages where the water committee has collapsed or lacks adequate community support and the scheme is as a consequence operating only partially or not at all.

Appropriate technology

A majority of respondents seem to think that alternative technologies are not appropriate. While there is clearly a perception that "high-tech" systems provide a better service, or that they represent the most modern and thus most desirable option, more effort should in future go into a thorough exploration with the community of all the options available and their relative advantages and drawbacks. Rainwater harvesting is currently not seen as a practical option, probably because villagers are unable to afford the initial outlay on tanks and collection systems.

Sustainability of water committees

While community structures seem to be the only feasible service delivery agents in the short term, these bodies suffer from some serious problems and shortcomings including:

- Difficulty in attracting new members
- Insufficient training, leading to inadequate skills levels

- The voluntary nature of the committees, resulting in a lack of incentive for members to remain involved
- Lack of powers to enable them to take effective action to enforce payment of water charges. The genuine inability of many people to pay makes this an apparently insoluble problem.

All these difficulties have resulted in a gradual decline in enthusiasm and participation amongst members of the committees and in some cases, to a total stalemate and breakdown in service delivery. Unless solutions are found to these problems, they might ultimately lead to the collapse of other water schemes. This danger is compounded by the prevalent notion that if a scheme ceases to operate, traditional water sources remain an alternative option. The attendant health risks and the extra burden on women would be unacceptable consequences of a reversion to this option.

Integrated development

While water schemes are in many cases the only development initiatives to date in these villages, it is important that they are not merely seen as ends in themselves. The point is to build on the initial enthusiasm generated by the schemes. Apathy and cynicism might otherwise result. National policy has not taken the broader development potential of water schemes into account.

Rather than viewing them as a one-off contribution to the improvement of rural life, existing water schemes must be built on and linked to other local development projects. The schemes can and should form the basis for integrated rural development clusters involving all relevant government departments, local authorities and other key agencies.

Recommendations

The research indicates a number of obstacles to adequate and sustainable delivery of clean water to rural communities. It has also come up with a number of potential solutions to these problems. These are listed below as recommendations.

A free lifeline supply of water

In line with original policy as codified in the RDP², rural water schemes could be established on a supply-driven basis. This would imply putting in place a basic level of service in all communities. Many experts argue that an entirely demand-responsive approach is inappropriate to a rural environment where absolute poverty remains a barrier to rural people expressing their water needs in terms of market demand. It is further argued that all schemes should therefore incorporate at least a minimum infrastructure standard for all households, as is currently the case in most urban projects. Furthermore, given its importance for basic health and survival, it seems rational for all households to have access to a free lifeline supply of water.

Current levels of poverty and unemployment make it extremely difficult for a significant proportion of rural households to afford regular water charges. Most respondents however felt that failure to pay for water should not result in a cut-off of water supply.

One solution is cross-subsidisation via a rising block tariff. This would permit everybody to obtain a minimum lifeline supply of water for free with increased unit charges for higher levels of consumption. Given that the overwhelming majority of rural dwellers are poor or very poor, and

² The RDP's stated short-term aim was to provide all households with a clean safe water supply of 20 - 30 litres per capita per day within 200 metres. A medium term standard of 50 - 60 litres per capita per day was also proposed.

that national government is decreasing subsidies for operating purposes in its budgetary allocations for rural water schemes, this will require cross subsidisation at a national rather than local level.³

An integrated rural development approach

Existing water schemes must be built on and linked to other local development projects. The schemes can and should form the basis for integrated rural development clusters involving all relevant government departments, local authorities and other key agencies. All new water schemes should be planned as part of a comprehensive local development programme.

The framework for this already exists under legislation such as the Development Facilitation Act and Local Government Transitional Act which provide for integrated development plans at local and district level. In addition, Government's upcoming rural development strategy should also place emphasis on problems of rural water supply and the linkages between availability of water and local economic development.

Link water provision to local economic development

Water schemes are often the only significant development input in rural areas. They could thus aim to provide a higher level of supply that can stimulate local economic development. Increasing the daily allowance per capita could provide at least sufficient water to help kick-start local economic activity such as small construction projects, subsistence agriculture and cottage industries. Rather than seeing this as an additional burden on the fiscus, this level of basic water subsidy could be an important kick-start to local economic development and a worthwhile investment in long term rural sustainability.

Bring the daily water allowance per person into line with international standards

For public health reasons alone, national water policy should at the very least be brought into line with international minimum standards that recommend a 50 litres per person per day Basic Water Requirement (BWR) for Fundamental Human Needs. In the interim, an attempt should be made to provide all households with the at least the minimum standards suggested in the RDP and in accordance with the time phases originally proposed.

Level of service provided by DWAF should move towards metered yard connections

While the level of poverty in rural areas raises affordability problems, existing research indicates that significant health benefits result from an on-site supply of potable water. According to a recent study, distance to the water source is of the utmost importance in curtailing water-washed transmission of disease⁴. In the light of this and also because of the high level of demand from respondents for on-site taps, DWAF should move towards provision of sufficient funding to allow for the installation of metered yard connections to all rural consumers. As a start, DWAF should fund a number of rural pilot schemes and linked research projects, to test the impact of metered yard connections on service payment levels and also on health.

Provide ongoing support to water committees

Given the obvious lack of local authority water delivery capacity at present, three options arise:

- Build local authority capacity and ensure that they are properly resourced
- Contract out local authority delivery functions to support agencies

³ Whelan, Idasa, 2000

⁴ Sanders and Groenewald (1996)

- Ensure that community structures develop sufficient capacity to undertake delivery.

It will be essential in the longer term to ensure that democratic local government plays its appropriate role in the delivery of water services, either directly or via intermediaries. Its current lack of capacity and limited resource flows to it from national government mean, however, that this is likely to be a long-term project. The obvious immediate approach should be to ensure that community structures have adequate resources and capacity to be water service providers.

Community responses indicate that an overwhelming majority are confident that water committees were trained and are able to operate and maintain the system. There are however villages where the scheme is operating only partially, or not at all. A process needs to be put in place to ensure that any shortcomings in the processes that established existing water schemes are remedied and that all water committees are capable of doing their job. Government should therefore urgently move to set up an ongoing training, support and mentoring programme to ensure their long-term sustainability. A conflict resolution service should be provided to water committees in cases where they have ceased to function or are in crisis due to a failure to reach consensus, or because of conflict with sections of the community.

DWAF should also consider organising exchange visits for PSCs about to embark on projects with PSCs of similar projects which are running successfully. Broader networking should also be considered between PSCs to share experiences and draw lessons from each other's successes and difficulties.

The consultation process with communities prior to the installation of new water projects has in many cases proved inadequate. This has often resulted in the imposition of water schemes or technologies that are not felt to be appropriate by community members. As a result, schemes have sometimes failed or proved inadequate. DWAF should in future ensure the effective monitoring and evaluation of consultation processes. Where necessary, DWAF should put in place a process for the "retrofitting" of the social and community components of rural water schemes where these have been a failure.

An additional option for ensuring the sustainability of water committees might be the payment of committee members for their services. A policy framework for such payment would need to be developed.

Provide adequate support and resources to local authorities

Democratic local authorities must eventually take on their appropriate role as rural water service providers. The research however indicates that, in rural areas, they lack capacity to undertake this role and are not seen as appropriate service providers by most community members.

Government could ensure that local authority training needs are assessed and that an ongoing training, support and mentoring programme is set up to ensure that they can take on their appropriate service provision role in the medium term. This might also involve assistance to local authorities in managing the outsourcing of certain service provision functions to support agencies. In order to ensure democratic control of local authority services, they should however remain under the control of the local authority and should not be privatised, either permanently, or via long term public-private partnerships that effectively undermine democratic accountability.

Our literature survey leads us to conclude that the BoTT approach could have the negative consequence of drawing away resources from the priority development area of rural local

government. Other development strategies such as public-community partnerships are seen as an alternative to public-private partnerships in the literature.

Given the obvious lack of local authority capacity at present, three options arise:

- In the medium to long-term, build local authority capacity and ensure that these institutions are properly resourced
- In the short-term, contract out local authority functions to public-community partnerships and support agencies such as NGOs
- In the short to medium-term, ensure that community structures develop sufficient capacity to undertake the task.

While the obvious immediate approach should be to ensure that community structures have adequate resources and capacity to be water service providers, ensuring that local government plays its proper role must however be the longer-term priority. Due to their inadequate tax base and falling inter-governmental transfers, most rural local authorities lack adequate resources to play an effective role as water service providers. The government should consider the appropriate resourcing of these structures to allow them to perform their functions effectively.

A campaign to inform communities of their rights

The research demonstrates clearly that few rural people are aware of their rights to water enshrined in the Constitution and in current legislation. A suggested option is that DWAF should fund and support an effective publicity campaign to ensure that rural communities understand their rights and the implications of the Water Services Act.

Encourage use of rainwater harvesting and alternative technologies

A number of respondents stated that while rainwater is harvested on a small scale, most community members are not able to afford the necessary tanks and equipment. Most communities also currently opt for relatively expensive diesel or electric pumps, which may be difficult to sustain in the long term.

DWAF should consider setting up a subsidy and training programme to ensure that alternative water sources such as rainwater harvesting, as well as alternative technologies, are fully exploited in rural communities.

ACKNOWLEDGEMENTS

The Steering Committee responsible for this research project consisted of the following persons:

Dr N. P. Mjoli, Water Research Commission (Chairperson)
Mr K. Pietersen, Water Research Commission
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The financing of the project by the Water Research Commission and the contribution of members of the Steering Committee are gratefully acknowledged.

The project was only possible as a result of the co-operation of many individuals and organisations. The authors wish to thank the following:

- Water committees and communities of the villages of Lalini, Ngqanda, AmaQolomba, Nzolo, Mannespoort, Xusha, Upper Hukuwa, Sabalele
- Mr Kodama, Chairman of the Hewu TRC
- Mr E. Booi, Camdekon Engineering Consultants
- Ms S. Mpahla, Mvula Trust, Eastern Cape
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The following staff of RSS also contributed to the research:

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- Nomsa Mbovani
- Lindelwa Nxu
- Moses Shasha

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1 GLOSSARY OF TERMS

BoTT	Build, Operate, Train and Transfer
BWR	Basic Water Requirement
DC	District Council
DCD	Department of Constitutional Development
DWAF	Department of Water Affairs and Forestry
LCD	Litres per capita per day
MIIF	Municipal Infrastructure Investment Framework
MIIU	Municipal Infrastructure Investment Unit
MSP	Municipal Service Partnership
O&M	Operation and maintenance
PPP	Public-Private Partnership
PSC	Project Steering Committee
RDP	Reconstruction and Development Programme
RSS	Rural Support Services
TRC	Transitional Representative Council
UDS	Urban Development Strategy
UIIF	Urban Infrastructure Investment Framework
WRC	Water Research Commission

2 INTRODUCTION

This research project, *A study of current water policy in relation to rural people's experience of its implementation: Case studies from the Eastern Cape*, was undertaken to determine the practical impact of the implementation of government water policies in rural areas. The conclusions reached as part of this process are based on extensive research surveys and consultation with community members in villages where water schemes were installed. In addition, other stakeholders were consulted including service providers, local authorities and the Department of Water Affairs and Forestry (DWAF).

It is hoped that the final recommendations are useful in improving the delivery of water to the rural people who need it most and that rural water schemes are able to make the crucial contribution to rural transformation intended in government policy.

2.1 The aims of the study are as follows:

2.1.1 To determine the practical impact of the implementation of government water policies in rural areas

Policies on paper are often different to the way they are implemented. Further, the way people experience policies is sometimes different from what was expected. The aim of this study is to determine the effect of the implementation of these policies in rural areas. All other aims listed are linked to this aim.

2.1.2 To determine the water services rural people feel they really need, including the level of service. Do current policies meet people's needs and what are people's perceptions regarding levels of service and the affordability of various service levels?

2.1.3 To determine the level of water services rural people feel they can afford and wish to pay for. How do people experience the current systems and what is the level of payment for such services?

2.1.4 To determine how government water policies are put into practice in rural areas. To create a practical picture of the impact of government policies on rural people - for example, the social impact of different levels of service.

2.1.5 To determine the extent to which people use the constructed infrastructure as well as actual usage. The use of infrastructure can serve as an indicator as to whether the original project has fulfilled its objective. There is evidence that people use some infrastructure only in times of need and it is important to determine the actual usage of such infrastructure.

2.1.6 To determine the level of community operation and maintenance. This is crucial for the sustainability of water supply. The issue of who owns the system - who is ultimately responsible for maintaining the system - will also be covered here.

- 2.1.7** To recommend solutions for all the above, where applicable. Recommended solutions in terms of the above aims will be put forward by communities, the research team, and other implementing agents.

2.2 Background

Rural Support Services (RSS) was commissioned by the Water Research Commission (WRC) to conduct research on the impact of government water policies in rural areas. Eight villages were selected randomly and a questionnaire on households was piloted in four of the villages. What follows is a report on the findings of the research study.

3 LITERATURE REVIEW

This survey is divided into five sections:

- The current situation in South Africa
- A review of the development of the policy framework for rural water delivery in South Africa
- A review of experiences and current policy trends internationally
- Developments in DWAF's approach
- A summary of some suggested solutions

3.1 The current situation

There is, in South Africa today, limited or non-existent access to infrastructure, education, primary health care and socio-economic opportunities for the majority of people. Rural women are affected particularly badly.

According to Statistics SA, at the time of the 1996 population census, less than half (45%) of the households in the country and only 27.3% of African households had a tap inside their dwelling. Just over half of all households (50.5%) had a flush or chemical toilet. 32.4% of households still used a pit latrine, 4.7% a bucket toilet while 12.4% had no toilet facilities at all. When looking at households without any toilet facilities, the Eastern Cape (29.1% without) and Northern Province (21.2% without) were the worst off. In contrast, only 2.5% of households in the best off province, Gauteng, had no toilet facilities. Nationally 52.2% of households had access to a refuse removal service at least once a week. Once again Northern Province (11.4% of households) and the Eastern Cape (34.4%) were the worst off in this regard¹. In the view of one group of researchers, if orthodox cost-recovery is used as a basis for future service provision to low-income households, there is likely to be only marginal improvement in this situation.²

According to the Department of Water Affairs and Forestry (DWAF), the water services industry in South Africa is faced with enormous challenges, mostly linked to the country's past. DWAF's document, *Water Conservation and Water Demand Management Strategy for the Water Services Sector*³, argues that two of these major challenges are:

- The enormous backlog of water services. It is estimated that approximately 25% of the country's population are without adequate basic water services.
- The financial viability of Water Services Authorities. DWAF estimates that more than 50% of authorities are in financial trouble and puts this down to inefficiencies and non-payment for services.

There are also, DWAF argues, "enormous discrepancies between the levels of service and the demographics of different areas which influence water demand and the provision of water services". It has identified three types of area: the "former white towns and cities", the "former urban black townships" and rural and peri-urban areas.

¹Statistics South Africa (2000)

²Bond, Dor and Ruiters (1999)

³Department of Water Affairs and Forestry (2000b)

The strategy document gives a brief generic overview of the state of water services in each of these area types. The “former white towns and cities” can be characterised as having first world standards. Most urban commercial and industrial consumers are located in such areas. The majority of domestic water consumers are houses with large gardens. Flats are only common in city centres. The average domestic homeowner’s water consumption in such areas is in excess of 35 kl /month.

The “former urban black townships” have a limited level of water services. These usually consist of a toilet and a tap for each stand. In the past adequate operation and maintenance of the reticulation system was not carried out, resulting in very high levels of unaccounted for water. The document is concerned that because houses belonged to the councils, maintenance of the plumbing was not the responsibility of the tenant. Problems include plumbing leaks, non-existent consumer metering and billing in many areas, charging of a flat rate for water irrespective of the volume consumed, very low levels of payment in most areas, very high levels of water unaccounted for, and very inefficient water usage. Most of the peri-urban and rural areas did not have access to water services in the past and relied on water directly from streams or boreholes⁴.

Rural and peri-urban areas are particularly deprived. Introducing his department's budget vote in the National Assembly, Water Affairs Minister Ronnie Kasrils said that there were more than eight million people in rural areas who did not have access to clean water. He also said that the original date projected for the fulfilment of the department's water services target - the year 2007 - might be unrealistic. If his department continued at its present rate, it would take twenty rather than seven years to reach its goal, he said⁵.

3.2 The development of the policy framework for rural water delivery in South Africa

The DWAF document goes on to explain that over the last few years, a number of projects have been commissioned to supply services and that it is currently a national objective to supply basic water services to all. The level of water services supplied to consumers varies according to the affordability of the community but usually consists of communal standpipes. It states that another important task for DWAF is to create awareness and ensure the education of people in rural areas who don’t have access to water services and rely on streams and bore holes. The emphasis in such areas is on reducing water pollution and the preservation of water resources for health reasons⁶.

Key principles followed across government in relation to service provision are that

- the user must pay the marginal cost of services;
- standards should be minimal for those who cannot afford to pay the "marginal cost" (i.e., the cost of each additional unit of operating/maintenance costs of the service);
- commercialisation and private participation in provision of infrastructure-related services should be pursued⁷.

⁴ Department of Water Affairs and Forestry (2000b)

⁵ SAPA, 9 June 2000

⁶ Department of Water Affairs and Forestry (2000b)

⁷ Bond, Dor and Ruiters (1999)

A variety of post-apartheid housing and infrastructure policies form the basis for the current delivery system⁸. Various laws and regulations have codified these policies.

The key issue is that of affordability. While the original meaning of the term "lifeline" was "free", a new definition of service delivery was proposed in the *White Paper on Water and Sanitation*⁹. The White Paper proposed that the "lifeline" price of water to retail consumers should be at least equal to the operating and maintenance expenses.

3.2.1 Government's service mandate

Two documents, the 1994 *Reconstruction and Development Programme* (RDP) and the 1996 Constitution, originally set out a mandate for levels of basic services under the new democratic Government.

The RDP goes in some detail into the level of water provision proposed. The section on *Meeting Basic Needs* states that "water is a natural resource, and should be made available in a sustainable manner to all South Africans". The document argues further that "the fundamental principle of our water resources policy is the right of access to clean water - 'water security for all' ". It advocates "an economically, environmentally and politically sustainable approach to the management of our water resources and the collection, treatment and disposal of waste".¹⁰

For those who compiled the document, water management has three main goals:

- meeting every person's health and functional requirements,
- raising agricultural output, and
- supporting economic development.

There is also an emphasis on training in water management for community organisations and on the integration of such management into overall planning.

The RDP's stated short-term aim is to provide every person with adequate facilities for health "by establishing a national water and sanitation programme which aims to provide all households with a clean, safe water supply of 20 - 30 litres per capita per day (lcd) within 200 metres, an adequate sanitation facility per site, and a refuse removal system to all urban households". The document goes on to propose a medium term standard involving an on-site supply of 50 - 60 lcd of clean water, improved on-site sanitation, and an appropriate household refuse collection system. Water supply to nearly 100 per cent of rural households should be achieved as well as adequate sanitation facilities for at least 75 per cent of rural households.

⁸ The *Housing White Paper* of November 1994 (Department of Housing), the *Water Supply and Sanitation White Paper* of November 1994 (Department of Water Affairs and Forestry), the *Urban Infrastructure Investment Framework* of March 1995 (RDP Ministry), the *Urban and Rural Development Strategies* of October 1995 (RDP Ministry), the *Urban and Rural Development Frameworks* of May 1997 (Departments of Housing and Land Affairs), the *Municipal Infrastructure Investment Framework* of July 1997 (Department of Constitutional Development), the *Local Government White Paper* of February 1998 (Department of Constitutional Development), the April 1998 *Policy Paper on Intergovernmental Finance* (Department of Finance), the August 1998 *Draft Regulatory Framework for Municipal Service Partnerships* (Department of Constitutional Development) and the December 1998 *Resource Pricing Policy for South African Water* (Department of Water Affairs and Forestry). Other papers from the Departments of Water Affairs and Forestry, and Energy and Minerals, are similar in tone and content.

⁹ Department of Water Affairs and Forestry, 1994

¹⁰ African National Congress (1994)

With regard to operation and maintenance systems, the RDP foresees a level of organisation ensuring minimum disruptions in service within two years. It argues that, particularly in rural areas, appropriate institutions, including village water committees, should be developed. Consultation with communities in the provision of water is deemed essential.

To ensure that every person has an adequate water supply, the RDP proposes a national tariff structure including:

- a lifeline tariff to ensure that all South Africans are able to afford water services sufficient for health and hygiene requirements;
- in rural areas, a tariff that covers operating and maintenance costs of services, and recovery of capital costs from users on the basis of a cross-subsidy from urban areas in cases of limited rural affordability.¹¹

Significant institutional restructuring is also proposed:

- the Department of Water Affairs should take responsibility for building competent local and provincial agencies that are capable of delivery;
- at local level, local governments must be made responsible for water distribution, provision of adequate sanitation facilities and waste removal, and the financing of these services through appropriate tariff and local tax mechanisms.

The new *South African Constitution*¹² also covers the issue of basic service provision. Chapter 2 of the Bill of Rights specifies that everyone has the right to have "access to sufficient food and water" and that the "state must take reasonable legislative and other measures within its available resources to achieve the progressive realisation of each of these rights".

The early 1994 acceptance of site-and-service principles in various pre-election development forums was however the real determinant of future developments.

The RDP's chapter on "Meeting Basic Needs" proposed that essential service needs should be met through vast increases in government subsidies when the market failed, and by mobilising additional resources through partnerships, more forcefully tapping capital markets, and via off-budget methods. It argued that "as a minimum, all housing must provide protection from weather, a durable structure, and reasonable living space and privacy. A house must include sanitary facilities, storm-water drainage, a household energy supply (whether linked to grid electricity supply or derived from other sources, such as solar energy), and convenient access to clean water." As time went on however, policy increasingly began to diverge from the original ideals of the RDP.

The RDP¹³ also specified that the rural land reform "programme must include the provision of services to beneficiaries of land reform so that they can use their land as productively as possible" and "must aim to redistribute 30 per cent of agricultural land within the first five years of the programme." The maximum land reform subsidy was however only R15 000 and provision of rural infrastructure and services was not considered as integral to land reform.

¹¹ African National Congress (1994)

¹² Republic of South Africa, 1996

¹³ ANC (1994)

The site and service approach clearly contradicts the intentions of the RDP. With regard to payment for infrastructure and services, the RDP ¹⁴ specifies the need for tariff restructuring, cross-subsidies and lifeline services to the poor, with respect to both water (including sanitation) and electricity. Let us examine how things have changed since the formulation of the original RDP approach.

3.2.2 The post-apartheid municipal services debate

The *Municipal Infrastructure Investment Framework* (MIIF) describes the main infrastructure and services options planned by government. Late 1994 and early 1995 *Urban Infrastructure Investment Framework* (UIIF) recommendations were that government would provide only minimal infrastructure and services to low-income urban South Africans. The draft *Urban Development Strategy* (UDS), released in October 1995, set standards for *urban* "municipal" areas (rural infrastructure plans had not been developed at that stage)¹⁵.

An average national distribution of 55:25:20 between full, intermediate and basic levels of services in municipal areas was considered a realistic target for the infrastructure investment strategy over the next ten years. "Basic services" meant communal standpipes (water), on-site sanitation, graded roads with gravel and open stormwater drains and streetlights (electricity). These services would be targeted at households with an income of less than R800 per month and charged for at between R35 and R50 per month.

"Intermediate services" entailed water provision through yard taps on site, water-borne sanitation, narrow paved roads with no curbs and open drains and 30 amps electricity with prepaid meters for households. These should be affordable to households which earned between R800 and R1700 per month and would cost them between R100 and R130 per month.

"Full services" meant house connected water supplies, full water-borne sanitation, paved roads with curbs and piped drains and 60 amps electricity provision. It was anticipated that households in the R1700-R3500 monthly income class could afford "low consumption" costing them between R180 and R220 per month. Households with monthly incomes of above R3500 were assumed to be able to pay for "full services at high consumption" at charges between R270 and R350 per month.

In the end, infrastructure standards were slightly higher than was initially proposed in the UIIF, draft UDS and early drafts of the MIIF. Instead of no electricity, there was the potential for urban households to receive an 8 Amp supply; and instead of paying R35-50 per month for these services, a subsidy of approximately R50 per low-income household was planned.

Key components of the basic MIIF package included: pit latrines, communal (not house or yard) standpipes, a weak electricity supply, gravel roads, open storm-water drains and communal waste dumps (not kerbside removal). Under the "low" growth scenario,

¹⁴ ANC (1994)

¹⁵ RSA (1995)

nearly 30% of urban residents would be subject to these low standards even after the ten-year plan for service provision (1997-2006) was fully implemented.

The rural standards suggested in the MIIF anticipated that 70% of the rural population would have the "basic" services discussed above after a decade and 20% no services at all¹⁶. In reality, in both urban and rural settings, as noted below, the implementation progress was far slower than even the low target levels specified in MIIF. Subsidies were inadequate to cover the service levels proposed by the RDP: "an on-site supply of 50-60 litres per capita per day of clean water" (section 2.6.7). Instead, an approach emphasising cost recovery and "limited" local-level cross-subsidies was adopted.

3.2.3 Water delivery

The 1997 *Water Services Act* provides for, amongst other things:

- the rights of access to basic water supply and basic sanitation;
- the setting of national standards and of norms and standards for tariffs;
- water services development plans;
- a regulatory framework for water services institutions and water services intermediaries;
- the establishment and disestablishment of water boards and water services committees and their powers and duties;
- the monitoring of water services and intervention by the Minister or by the relevant Province;
- financial assistance to water services institutions.¹⁷

The definition of what constitutes **basic water supply and basic sanitation** continues to be re-defined downwards. Recent draft regulations in terms of the Act threaten to lower existing standards for rural consumers even further. They propose that compulsory national standards for basic sanitation should be the provision of appropriate health and hygiene education, and technical support to enable the construction of at least a ventilated improved pit toilet (VIP) per household. The draft regulations also propose that compulsory national standards for basic water supply should be a minimum quantity of 7 litres per person per day of potable water (less than 30% of even the inadequate RDP standard), available on a regular, daily basis for low density areas available within 200 metres walking distance.¹⁸

The government undoubtedly faces an enormous task in ensuring delivery of basic water services. As recently as 1998, DWAF estimated that 18 million South Africans were still without basic water supply and that 27 million had no basic improved sanitation¹⁹. In response, DWAF had by year-end 1998, served three million people, mainly in rural areas, with new water connections²⁰. The sustainability of these water projects is however open to question. According to some reports, as many as 90% of the new taps were inoperative²¹. Water cut-offs also rose sharply. For example, 70 000 township

¹⁶ Department of Constitutional Development (1997)

¹⁷ DWAF (1997c)

¹⁸ DWAF (2000a)

¹⁹ SA Institute of Race Relations (1998)

²⁰ Nelson Mandela (1999)

²¹ Bond, Dor and Ruiters, April 1999

residents of Leandra, Mpumalanga, suffered 70% water pressure cut-off for several months in late 1998 by supplier Rand Water, due to a non-payment rate of nearly 70%²².

According to Bond and Ruiters, during the first half-decade of democracy, water and especially sanitation services to the majority of South African consumers deteriorated in relative terms. They argue that "a lower percentage of South Africans enjoyed access to affordable water in their homes or yards in 1999 than in 1994 (given population growth in excess of 2% and low water-system installation rates)". While a figure of three million people newly supplied with water through government's rural communal taps between 1994 and 1999 is often cited, the authors claim that "by mid-1999 it was semi-officially acknowledged that far fewer than half those taps still worked, in the wake of systemic design flaws and affordability constraints". They are also critical of the fact (they describe this as "telling"), that despite the spending of billions of Rands on such projects, "no systematic evaluation was available to give a precise percentage of failed water projects"²³.

The development of water and sanitation policy²⁴ reflected - and in some important respects preceded - the overarching urban, rural and municipal infrastructure policy processes. Six months after the 1994 election, Minister Asmal's first white paper announced that "where poor communities are not able to afford basic services, government may subsidise the cost of construction of basic minimum services but not the operating, maintenance or replacement costs".²⁵

The insistence on charging the full operating and maintenance costs (out of line with the RDP mandate that all are entitled to access to sufficient lifeline water for their reasonable needs) was based on two assertions:

- First, the *Water and Sanitation White Paper* states that if government covers operating and maintenance costs, there will be a "reduction in finances available for the development of basic services for those citizens who have nothing. It is therefore not equitable for any community to expect not to have to pay for the recurring costs of their services. It is not the Government who is paying for their free services but the unserved." The *White Paper* thus argues for a "some for all, not all for some" approach.
- Second, the *White Paper* states that payment for services is the single defining feature that determines whether people and communities behave responsibly: "The other reason why operating and maintenance costs should be borne by the communities is the principle of Community-Based Development. If the community expects some outside agency to be responsible for keeping their supplies going, they will have no control over the processes and lose leverage and ownership. Responsibility for keeping the service going is placed with a remote authority and accountability is lost. This will have an impact on the reliability of supplies". The *National Sanitation Policy White Paper*²⁶, released in 1996, reiterates the "some for all, not all for some" approach and included as a principle that the user pays:

²² *Sunday Independent Reconstruct*, 20/12/98

²³ Bond and Ruiters (2000)

²⁴ The 1997 Water Services Act defines basic sanitation as the provision of appropriate health and hygiene education, and technical support to enable the construction of at least a Ventilated Improved Pit Toilet (VIP) per household

²⁵ DWAF (1994)

²⁶ DWAF (1996)

"Sanitation systems must be sustainable. This means they must be affordable to the service provider, and payment by the user is essential to ensure this"²⁷. Asmal however argued against the supply-side definition of "lifeline". At the launch of the 1996 Annual Report of the Working for Water Programme, he said that by "lifeline" he meant "a life-giving tariff, and not some engineering solution like the "operating and maintenance costs."²⁸

The *White Paper on a National Water Policy for South Africa* of 1997 is a compromise between the cost recovery and lifeline approaches. It concedes the right of all to have access to basic water services and includes the following key proposals for incorporation into the Water Law:

- To promote the efficient use of water, the policy will be to charge users for the full financial costs of providing access to water, including infrastructure development and catchment management activities
- To promote equitable access to water for basic needs, provision will also be made for some or all of these charges to be waived²⁹.

The document also defines a "reserve" for basic human needs: "This will be provided free of charge in support of the current policy of Government which is to encourage the adoption of lifeline tariffs for water services to ensure that all South Africans can achieve access to basic services." But the 1997 *White Paper* only deals with the first tier level, that of water in catchments under central government control, and excludes the second and third tier levels, namely water as distributed and delivered by agencies including water boards and local governments. In practice this amounts to an acceptance of the position that communities fetching water from natural sources do not need to pay for the first 25 litres per person per day. For communities that receive water from built water systems, the document does not go beyond the principle of access to basic water services and does not describe how this entitlement is to be achieved.

In practice the Department of Water Affairs is instructing its staff and all agencies carrying out community water supply and sanitation activities on its behalf to implement the standards and tariffs as defined in the 1994 *White Paper*. Community water supply projects include communal standpipes at 200 metres and the principle of full payment for the operating, maintenance and replacement costs is insisted on. Once projects have been built, communities do not receive further support³⁰.

This is confirmed by recent figures on the funding of local government from nationally raised revenue (the so-called equitable share). According to the Department of Finance's 2000 Budget Review, growth of 13.9% in real terms is projected for local government transfer revenue between 1999/00 and 2002/03. Included in this expenditure are two payment schemes run by the Department of Water Affairs. Both of these are aimed at rural areas and are referred to as Community Water and Sanitation schemes. One covers capital schemes and the other operating costs. Together these schemes make up approximately 19.6 % of local government's total transfer revenue. The capital scheme payments increase at a projected real rate of

²⁷ DWAF (1996)

²⁸ Asmal, K., (1996a)

²⁹ DWAF (1997)

³⁰ Bond, Dor and Ruiters (1999)

61.4 %, but the operating payments (the basis for ongoing support to community water schemes) decrease at a projected real rate of 10.5 % from 1999/00 to 2002/03³¹.

3.2.4 Delivery crisis

As mentioned above, Minister Ronnie Kasrils recently said that there were more than eight million people in rural areas who did not have access to clean water and that the original date projected for the fulfilment of the department's water services target - the year 2007 - might be unrealistic. He admitted that if his Department continued at its present rate, it would take twenty rather than seven years to reach its goal.³²

Various recent studies of local water supply projects indicate a serious crisis in delivery and general failure to meet planned targets. There are generally said to be serious problems in the community water supply projects with a rate of failure as high as 90%. Apart from possible affordability constraints and an unwillingness to pay for communal standpipes, other important reasons for failure include poor quality of construction, areas within communities without service and intermittent supply.

Community water supply systems have led to numerous instances of inequity. Adjacent communities pay different amounts depending on the systems installed. Rural households pay for water from standpipes, whereas households in Durban getting water on site, get the first 6 kilolitres per month for free (according to the Durban Metro, 6 kilolitres is the break even point between the cost of collecting payment and the amount collected). Communities with new water systems must pay for the ongoing functioning of their systems whereas some communities supplied by the former Bantustan governments get their water for free. These inequities have led to significant levels of community tension within and between villages. And, despite the claim to provide "some to all," vast areas have not received water services to date.³³

A July 1998 evaluation of RDP 1 and completed RDP community water supply projects in the Eastern Cape³⁴ indicates the extent of the problem. The evaluation aimed to assess these projects, primarily with regard to sustainability and operation and maintenance. Four main areas were investigated:

- community participation and management
- training
- technical aspects
- post-project activities

The evaluation found that, with regard to community participation and management, communities felt they had not been properly consulted and were merely informed that they were to receive a water project. This led to problems including inappropriate services, conflict, and vandalism of pipes.

Despite guidelines stipulating consultation, community representatives were dissatisfied with the level of consultation by engineers. The result was that recipients were not informed of their responsibility for costs of operation and maintenance

³¹ Whelan (2000)

³² SAPA (2000)

³³ Bond, Dor and Ruiters (1999) and Bond and Ruiters (2000)

³⁴ DWAF (1997b)

before work started. Community structures had little to do with organising labour and there was dissatisfaction over rates and selection of who would get jobs. Men were also felt to be favoured above women in this process.

Training of community members was also inadequate. Key findings were:

- Most training was not project specific and did not equip committees to undertake operation and maintenance
- Most training was received too late to be useful in implementation
- There was little assistance in setting up O&M systems
- Training would have been more appropriate in the project area.

The extent of the problem becomes clear when looking at technical issues.

- Of 29 schemes, only 48% were working and operational.
- If, however, management and collection systems are included, the number of operational projects was "dramatically less"
- Of 19 RDP schemes, only 26% were working
- Gravity systems were found to be more likely to be working than pumped systems, especially where there was inadequate capacity building and no development of an O&M system.

While there was virtually 100% willingness to pay (R5/household average) for *working* water services, many schemes were not operational. The key reason for this was that most projects had no O&M system due to:

- lack of training and support,
- lack of consultation on responsibilities,
- lack of awareness of the need to pay for services,
- political conflict on the ground.

There was no cost recovery on most projects and a general feeling of lack of consultation with the community³⁵.

Another study of rural water schemes discovers problems similar to those raised in the Eastern Cape study³⁶ above. This study was conducted in 1998 for the Water Research Commission³⁷.

Based on 22 Mvula Trust and 2 DWAF rural projects in Northern Province, the Eastern Cape and KwaZulu-Natal, the study looks at reasons for the failure of a high proportion of rural community water supply schemes. According to the author, this failure is manifested in communities withholding payments negotiated when the projects were initiated.

The results of the research point to problems with the conceptualisation of the national rural community supply initiative. The programme was designed to provide each household with 25 litres of clean water per person per day within 200 metres. Villagers were to pay operations and maintenance costs. Agreements were negotiated

³⁵ According to a June 2000 SAPA report, Minister Ronnie Kasrils stated in Parliament that cost recovery on rural schemes was currently less than one percent of operation and maintenance costs.

³⁶ DWAF (1997b)

³⁷ Water Research Commission (1998)

with elected community representatives (water committee) while community members were trained to manage the project as well as the ultimate water scheme.

The research found that

- Many communities already had their basic water needs met and wanted a higher level of service than the national water supply programme envisaged
- Projects that were successful were situated in villages with a dire need for water and which benefited appreciably from the project
- Communities which felt that their basic need for water was already satisfied (even if it was not clean water) and found that their expectation of a higher level of service (a tap in their own yard) was not met, withdrew their payments
- Collapse of water projects did not happen simply and directly - there were usually other problems during implementation. These were the real reasons for failure but the water committee could not find enough enthusiasm to resolve them, probably because they did not really need the water.

The study argues that a problem with the conceptualisation of the water programme is the assumption that community cohesiveness is a valid basis for election of a water committee with which outsiders can negotiate and conclude agreements. The research casts doubt on this assumption. In some cases the community preferred to abandon the project rather than risk internal conflict and loss of cohesion.

Within projects reasons for failure included:

- Weak community leadership
- Lack of communication between the water committee and the community
- Lack of project management expertise
- Impatient and ill-advised engineering consultants
- Unequal benefits from the water scheme to community members
- Projects proceeding without contributions from all community members
- No way of forcing community members to pay
- Multi-village schemes too difficult for a water committee to manage
- A low level of service
- Unwillingness to give money to fellow villagers
- The role played by organisations such as SANCO and ANCYL.

The author claims that, affordability, although used as an excuse, does not seem to be the real reason for non-compliance.

The review recommends improved community management, including making consultation integral to the whole process; conflict resolution support; enforcement of equitable distribution of jobs between men and women; and consideration by DWAF of project steering committee representation at project management meetings.

It is also suggested that training and capacity building should begin early and be viewed as integral to the whole process. Such training must be project specific, not generic, and should ensure accountability and transparency of committees vis-à-vis the community. O&M training is essential for community management. Community members should also be offered mentorship and support while the capacity of local government should be strengthened.

Other general points include the need to address training shortcomings at completed projects and assist committees to develop management, tariff collection and technical management systems. Initial feasibility studies should include institutional and social assessment and mechanisms must be put in place to address the communication gap between DWAF and communities on completed projects.

Additional issues for consideration include: consideration of flexible basic service options, the need for an ongoing monitoring and evaluation mechanism and resolution of outstanding technical issues.

These are all clearly issues, which demand a greater involvement of the appropriate local government structures. Given that many of these structures currently lack the capacity and resources to play an appropriate support role, some sort of interim arrangements are necessary. These issues are considered further in the conclusions and recommendations at the end of this report.

3.3 Experience and current policy trends internationally

Problems such as those noted in the above two reports are common to many projects both locally and internationally. One international response to a generalised crisis in rural water delivery is the World Bank's proposal for a transition from *supply-oriented* to *demand-responsive* services.

The demand-responsive approach was the key theme of the World Bank's Community Water and Sanitation Conference held in Washington DC in May 1998.³⁸ The approach has subsequently been promoted internationally by the Bank as the alternative to the traditional supply-oriented or basic service approach.

There are four overarching principles, which form the basis of the demand responsive approach:

- Water should increasingly be managed as an economic as well as a social good
- Management should be focused at the lowest appropriate level
- A holistic approach to the use of water sources should be employed
- Women should play a key role in the management of water.³⁹

The Bank argues that the demand responsive approach is "one in which supply is tailored to meet the economic demands of users". The approach is summed up as one in which technology and services options are "based on the willingness to pay - based on the principle that more expensive systems cost more".⁴⁰ Leaving aside the Bank's talk of a "holistic approach" and a key role for women in water management, it is clear that a demand-responsive approach means that the level of service will ultimately depend on what rural consumers are able to pay.

Explaining this approach further, a paper by the Bank's Mike Garn⁴¹ describes the approach as a change in thinking about the nature of water from social good to

³⁸ The World Bank, 1998

³⁹ J. Sara, M. Garn, T. Katz; The World Bank (1998)

⁴⁰ J. Sara, M. Garn, T. Katz; The World Bank (1998)

⁴¹ Mike Garn, The World Bank (1998)

economic good. The test of this approach is whether the users are willing to pay at least as much as the economic cost of water services.

According to Garn, the supply-dominated approach (such as is proposed in the RDP) has led to the adoption of appropriate low-cost technologies and a minimum level of service, whether or not users see them as an improvement over existing water systems. Most projects do not offer users choices of different levels of service, as this would increase the cost to government. Dissatisfaction with service quality leads to non-payment, cutbacks and the need to ration reduced funds.

For Garn, one response is to offer a choice between different levels of service at a clearly stated price to user - let the user decide. The issue of competition for funds can, according to this model, be resolved by letting communities self-select for projects under widely understood rules about cost-sharing requirements for various service options. Incentives for demand-based local selection of service level can be provided through negotiated agreements (between the supplier organisation and the community) about payment for costs under established cost-sharing rules.

The demand-responsive approach to service delivery is also put forward as providing increased scope for private sector and/or NGO involvement in implementation of rural water and sanitation projects.

It is argued that demand (willingness to pay) is often enough to support service levels above the minimum often prescribed. Demand is not well correlated with needs-based estimates of affordability and can't be predicted on basis of income alone. This means that projects targeting only the poor do not require extensive government subsidies as many had assumed. While the assumption was that people would be willing to pay 3 to 5% of their income for water services, in reality some will want to pay less and some may be willing to pay more. According to a 1993 World Bank study⁴²: "household income, though often important, is not the overriding determinant of demand for improved services".

Garn argues that a number of factors in fact influence demand for improved water services and willingness to pay for improvement. These include:

- household income, gender, education, occupation & assets
- the relative merits of the current supply system (cost, quantity, quality, reliability)
- household attitudes toward government policy in the sector and towards other organisational representatives with whom local citizens deal as well as the degree to which there is a sense of entitlement to services.

For successful demand-responsive water projects, says Garn, participation cannot be token. The community must play a role in designing programmes and selecting the type of facility, the level of service and conditions under which they are offered. There will be a willingness to pay more if people perceive that improved service will provide more, better and more reliable services than current sources do. They will also be willing to pay more for higher levels of service.

⁴² The World Bank (1993)

A project can be considered to be demand-responsive if users make a substantial number of decisions about the type and level of service they want and there are negotiated arrangements for cost sharing based on transparent rules.

While subsidies are allowed in demand-oriented programmes, the approach emphasises that users should be responsible for O&M costs (paid in cash or labour). The subsidies should also be given as a per capita or household amount with users responsible for all additional costs. Government's fiscal responsibility can thus be fixed and users get a relatively clear picture of price to them of various level-of-service options.

In his recommendations Garn argues that supply-driven and centrally directed approaches to rural sector services have little chance of sustainable improvement. The rural sector is, as a result, in transition to a more locally controlled and demand-oriented approach. The main elements of the approach are:

- rules that give users incentive to reveal their demand and supply agencies incentive to act on that information
- implementation procedures that encourage adherence to rules and transparency in their application

The Water Research Commission⁴³ study mentioned above, proposes solutions which are largely in line with the World Bank's approach. The report recommends an essentially demand-responsive approach:

- The national water initiative should be adjusted to provide for a higher level of service where communities feel their basic need for water has already been met. This would entail taps in each yard where the water source can support this
- Users should pay towards the higher level of service as well as the O&M costs, preferably by pre-payments
- Projects should be undertaken with community consultation
- Projects should include some kind of provision for the indigent.

Although, according to the WRC study, there is an expressed desire for a higher level of service such as yard taps, it remains unproven whether communities will be willing or able to pay for this. Suggestions for a pilot study to investigate this issue further are made at the end of this report. The issue of additional provision for the indigent and principles, which should guide this, are also considered further at the end of the report.

3.4 Developments in DWAF's approach

There is now fairly wide concern that DWAF has moved away from the entitlement to water as spelt out in the Constitution and from the mechanism of financing this entitlement as spelt out in the RDP.

While the insistence on communal standpipes is unchanged, they are now being built with prepayment meters to ensure payment up front. Instead of moving towards the medium-term aim of the RDP and providing taps on site, the Department has relaxed the

⁴³ Water Research Commission (1998)

200-metre criterion and allowed for standpipes further apart so as to limit the number and thereby cost of prepayment meters⁴⁴.

As mentioned above, the latest proposal from the Department indicates a radical reduction in even the 25 litre daily supply promised in the RDP. Draft regulations in terms of the Water Services Act which are currently under consideration, propose a reduction of the basic water supply for low density areas to a minimum quantity of seven litres per person per day of potable water available within 200 meters walking distance⁴⁵.

Another DWAF response to the crisis of delivery has been consideration of private sector management assistance, contracting out, concessions and privatisation of infrastructure.

In fact, Water Affairs Minister Kasrils recently argued that if progress was to be made in addressing the enormous backlogs, his department had to use the resources available to it in the private sector. Speaking in Parliament in this regard, he said: "I have spent a great deal of time studying this issue... (and) have had to set aside views from a former millennium and attempt to look objectively at the situation - given current reality".⁴⁶

3.4.1 Municipal services partnership policy

Since 1995 there has been a growing emphasis within the Department of Constitutional Development (DCD) and DWAF on a "partnership" approach to service delivery. Municipalities were encouraged to contract out infrastructure-related services to the private sector using what were initially called Public-Private Partnerships (PPPs). In 1997 the DCD issued guidelines and helped establish a Municipal Infrastructure Investment Unit (MIIU) based at the Development Bank of Southern Africa. This was followed by DCD's draft regulatory framework in August 1998, in which PPPs were renamed Municipal Service Partnerships (MSPs) and characterised as "a variety of risk-sharing structures within public-public, public-private and public-NGO/CBO partnerships"⁴⁷. By December 1998, the SA Local Government Association and DCD had negotiated a Municipal Framework Agreement with unions.

Beginning in 1996, DWAF's Community Water Supply and Sanitation programme commissioned several extremely small-scale, rural PPPs, known as Build-Operate-Train-and-Transfer (BoTT) contracts, involving private firms and some NGOs. A number of serious problems soon emerged with these, including unsustainability, lack of consumer affordability, poor technical design, poor community control functions, mismatched NGO/private-sector roles and expectations, systematic inconsistencies with neighbouring government-subsidised water schemes, and lack of training and transfer prospects. By 1999, the concept was in many areas evaluated as a "failure" with respect to implementation by DWAF and DCD⁴⁸.

⁴⁴ Bond, Dor and Ruiters (1999)

⁴⁵ DWAF (2000)

⁴⁶ SAPA (2000)

⁴⁷ DCD (1998 v)

⁴⁸ Masia *et al* (1998); Bakker (1998)

Concerns over the PPP approach were flagged in an international literature review⁴⁹. These included:

- corruption in the tendering and drawing up of contracts, particularly in the US;
- monopoly in the privatised service;
- higher user charges;
- inflated director's fees, share options, and management salaries;
- widescale retrenchments;
- anti-union policies;
- effects of privatisation bearing most radically on the poorest in the community;
- widespread evidence of more cut-offs in service and generally a harsher attitude towards low-income "customers."
- an emphasis on pre-payment meters and "*self-disconnection*", as public goods have been commodified
- the rooting out of cross-subsidies after privatisation and their replacement by "cost-reflective" pricing with the poorer paying more and better off people with cheque accounts paying less with direct debits.

Notwithstanding the criticisms, the 1998 *Local Government White Paper* endorsed MSPs, while acknowledging risks of "cherry-picking" (refusal to provide services to low-income areas), poor quality services and unfair labour practices. In sum, government's "basic rationale" appears to be that "MSP projects can save or avoid municipal expenditures"⁵⁰.

3.4.2 The BoTT experience

A January 1999 research report on the BoTT Programme in the Eastern Cape and KwaZulu Natal⁵¹ looks at the early experiences of MSP water projects.

The report states that provision of clean water to rural communities is in a state of review owing to problems with the programmes so far. The report argues that advances made may be over-stated with sustained delivery in crisis. There is dislocation in delivery, protest and unhappiness about the water delivery programme, a threat of demoralisation of those mobilised, and a waste of resources.

The above points raise fundamental issues about

- The planning, financing and project management of water delivery and particularly the BoTT programme
- the permanence of the advances being made (it is reported that 2/3 of new projects are not working)
- future development as resources are being diverted to operations and maintenance.

The report states that, internationally, problems of lack of community involvement have led NGOs to raise

- the need for greater community control,
- use of appropriate technology and
- community management of operations and maintenance.

⁴⁹ Hemson (1997)

⁵⁰ Department of Constitutional Development (1998)

⁵¹ Hemson (1999)

It is however argued that this approach has now been appropriated by international finance institutions. These finance institutions call for projects to be "demand responsive", wish them to draw little from state funding and want cost recovery to be ensured. The report claims that this approach emphasises private sector involvement and forms of privatisation to ensure better services. In rural areas markets in water and mini-contractors are being proposed to bring better operations and maintenance. This is seen as a solution for better service delivery and more sustainable services. While these approaches relate mainly to urban situations, they also strongly challenge the tradition of public provision of water to the rural poor⁵².

The author says BoTT is presented as a solution to problems of service delivery. By combining a national government programme with private sector initiative, provision of water services to rural areas is to be accelerated. The emphasis is on quick implementation rather than on long-term management of rural water systems.

In the two regions examined, BoTT has been criticised for

- causing administrative confusion
- lengthening implementation time
- being more expensive
- cost over-runs
- not being a genuine PPP as the private sector provides no investment and bears no risk as its bills are met by the state
- being a form of privatised service delivery (by unions)
- being the preserve of bigger and more powerful, profit-driven civil engineering concerns (by small concerns and NGOs). This gives rise to concerns:
 - that consortia will displace NGOs as consultants in implementation of water projects
 - over the methods by which a schedule of rates is arrived at
 - that bureaucratisation is taking place
 - over the skewing of development priorities by the profit motive
 - over the use of NGOs as junior appendages in consortia to deal with institutional and social development issues.

The report concludes that

- The BoTT experiment should not be continued as it draws away resources from the priority development area of rural local government capacity building
- Alternative development strategies should be sought in public-community partnerships involving local authorities, water boards, NGOs and smaller consultants who have a long-term commitment to sustainable water services.

3.5 Summing up: proposals for improvements in service delivery

To conclude this literature review, we summarise the main proposals for improvements in service delivery from the documents studied.

⁵² World Bank Vice-President for Special Programs Ismail Serageldin argues that governments need not raise the additional investments themselves, nor turn to the World Bank for more loans. Enabled communities, together with the private sector, could raise the \$180 billion needed as annual investment for water services. (France 2 "Télématin", March 2000)

3.5.1 Three different politico-ideological perspectives

In a recent paper, Bond and Ruiters identify what they term "three different politico-ideological perspectives" in contestation over water policy. These are

- An orthodox economic concern with maximising Gross Domestic Product growth at virtually any cost. This approach argues that those who can pay the highest cost for water should have greatest access and that water has become an "economic good" like virtually any other.
- The view that society should consider positive "multipliers" associated with water, for which access translates into other social benefits (public health, ecological, gender equalisation, economic, geographical). This approach favours state regulation and some degree of consumption subsidies
- A third discourse which they label socio-environmental justice. This puts the issues of water access and pollution within a socio-political (and social-struggle) context first and foremost, and "poses firm moral and distributional questions about that context". The authors argue that this socio-environmental justice argument was included in the South African Constitution's Bill of Rights in 1996: "everyone has the right to an environment that is not harmful to their health or well-being... everyone has the right to have access to healthcare services, including reproductive health care; sufficient food and water; and social security..." (RSA, 1996, s.24.a, s.27.1)⁵³.

While the original approach of government policy was generally along the lines of the third option described above, there is a growing preference for a cost recovery approach and a further reduction in the daily water allowance to as little as 7 litres per person per day⁵⁴.

3.5.2 The demand-responsive approach⁵⁵

The documents covered raise a number of possible solutions to the difficulties currently experienced with the rural water supply programme. The demand-responsive approach approximates closely to the first category listed by Bond and Ruiters.

To sum up, this argues that supply-driven and centrally directed approaches to rural sector services have little chance of sustainable improvement. The rural water supply sector is said to be in transition to a more locally controlled and demand-oriented approach. The main elements of the demand-responsive solution are:

- To develop rules that give users incentive to reveal their demand and give supply agencies incentive to act on that information
- To develop implementation procedures that encourage adherence to rules and transparency in their application

While claiming to be responsive to user demand, the outcome of this approach is likely to be a virtual freeze on development in rural areas where communities are too poor to express their demand for an adequate supply of water in market terms.

⁵³ Bond and Ruiters (2000)

⁵⁴ DWAF (2000a)

⁵⁵ Mike Garn (1998)

In the South African context this approach is further developed in the Dreyer study commissioned by the Water Research Commission⁵⁶.

The report recommends that

- The national water initiative should be adjusted to provide for a higher level of service where communities feel their basic need for water has already been met. This would entail taps in each yard where the water source can support this and community members can afford it. Research undertaken for this report also indicates a substantial community demand for higher service levels in the form of yard taps. Our report suggests a pilot study process to test the viability of such an approach.
- Users should pay towards the higher level of service as well as the operation and maintenance costs, preferably by pre-payments. This proposal represents a step backward from original RDP proposals for a free lifeline supply of water to all. It unfortunately also reflects current DWAF practice.
- Projects should be undertaken with community consultation
- Projects should include some kind of provision for the indigent. There was general agreement from most respondents in our study that such measures are required. Proposals in this regard involving national cross-subsidisation are made in the concluding section of this report.

Additional suggestions from the literature survey for improving on the effectiveness of community water schemes are listed below. Many of these are included in the proposals made in the final section of this document.

3.5.3 Public-community partnerships

An alternative approach⁵⁷ is that alternative development strategies should be sought in public-community partnerships involving local authorities, water boards, NGOs and smaller consultants who have a long-term commitment to sustainable water services.

3.5.4 Other proposals include:

3.5.4.1 Community management

- Consultation with the community must be integral to the whole process
- Conflict resolution support must be given where there are potential divisions leading to conflict and disruption
- Equitable distribution of jobs between men and women should be enforced
- DWAF should consider representation of project steering committees at project management meetings

3.5.4.2 Training and capacity building

- This must begin early and be viewed as integral to the whole project process
- It should be project specific, not generic

⁵⁶ Dreyer (1998)

⁵⁷ Hemson (1999)

- It should ensure the accountability and transparency of water committees vis-à-vis community
- Operation and maintenance training is essential for community management
- Mentorship and support should be provided to community members
- The capacity of local government must be strengthened.

3.5.4.3 General issues to be resolved include

- Addressing training shortcomings at completed projects. Committees need to be assisted to develop management, tariff collection and technical management systems. The potential role of local authorities in this process receives further consideration in the concluding section of this report.
- Incorporation of institutional and social assessment into project feasibility studies
- Putting in place mechanisms to address the communication gap between DWAF and communities on completed projects
- Consideration of flexible basic service options
- Putting in place ongoing monitoring and evaluation systems
- Resolving outstanding technical problems.

4 MATERIALS AND METHODS

A combination of household interviews, focus groups and individual interviews was chosen for this study. Although the face to face administration of interviews can often be time consuming, they are probably more frequently used than any other technique because they allow the researcher to explain the questions if the respondent is not clear on what is being asked. This method also allows the researcher to probe for further explanations or clarifications from respondents. Focus groups and individual follow-up interviews were used to gather additional data and further clarify conclusions gleaned from the household interviews.

4.1 Profile of Respondents and Response Rate

The survey had an overall response rate of 90% (representatives from 144 of the 160 households targeted were actually interviewed). Of all respondents interviewed, 66.7% were female and 33.3% were male (see Table 1, below). While accurate figures on the gender composition of the villages are not available, this would seem to indicate that women make up the majority of the adult population. This would not be surprising, given a history of migrant labour in these areas. Although the research team targeted 20 households in each village, it can be seen from the tables that AmaQolomba with seven (7) households interviewed and Ngqanda with 17 households, had the lowest response rate. This can be explained as follows:

- 4.1.1** The figures that we had at our disposal indicated that AmaQolomba had 22 households whereas it transpired that there were only 10. The reason was that our key informant (in this case the implementing agent) had actually counted houses instead of households. At the time of the interviews the occupants of three households were not present.
- 4.1.2** In Ngqanda severe time constraints prevented us from conducting 20 interviews. (Demographic information is annexed under table 3.4). This village also proved to be the most difficult to work in with many respondents either suspicious or reluctant to participate. As a result, substantially more explanation of the research project was needed. It seems that problems in this case were caused by a power struggle between the local headmen and his followers on the one hand, and the village water committee and ANC on the other.

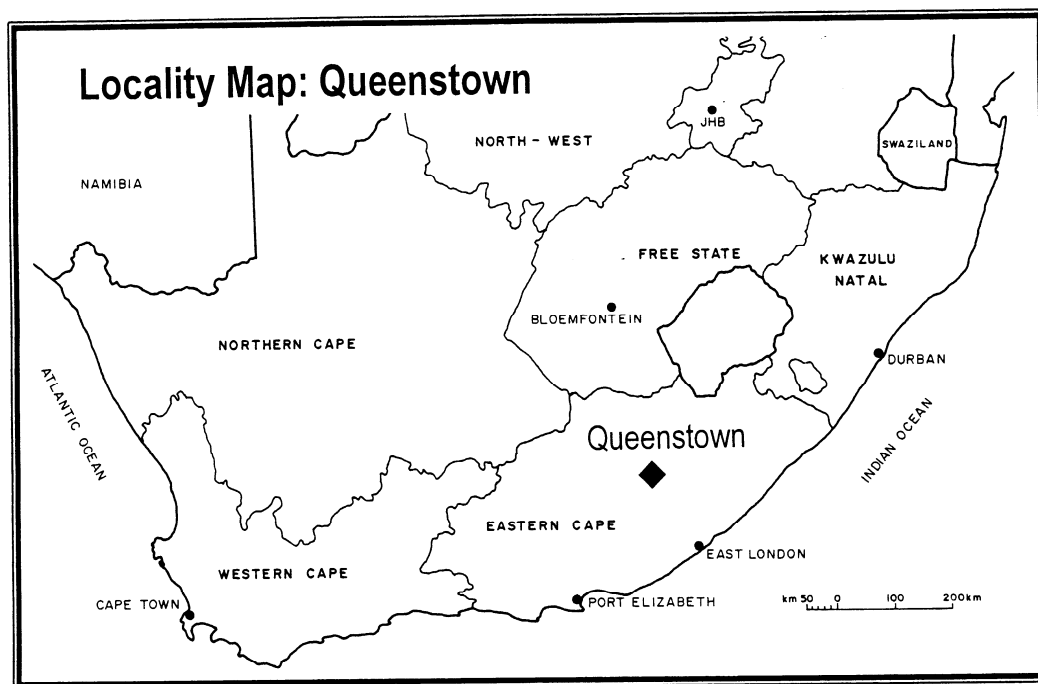
Table 1

Villages and Total Households Surveyed

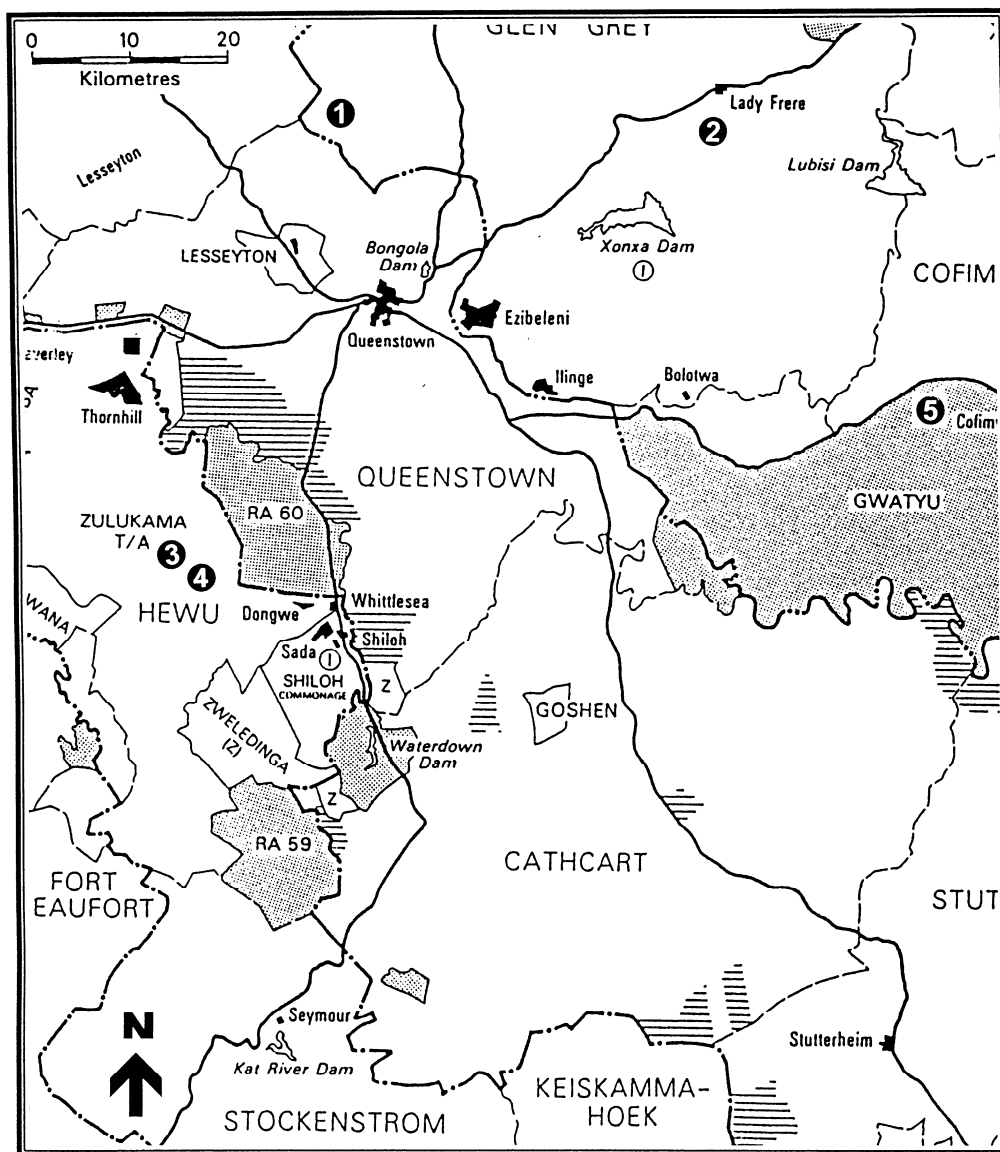
Village	Number of households surveyed	Average number of persons in household	Male Respondents	Female Respondents
Qoqodala District				
Lalini	20	5.1	8	12
Mannelspoort	20	5.7	3	17
Xusha	20	5.8	6	14
Nzolo *	20	6	9	10
Sabalele	20	6	7	13
Ngganda	17	5.7	7	10
Hewu District				
Upper Hukuwa	20	5.9	7	13
AmaQolomba *	7	6.2	1	4
TOTAL*	144	5.8	48	93

* Gender was not recorded in all cases

4.2 Queenstown location map



3.3 Villages location map



Locality Plan of Villages Surveyed

Key to villages	
1.	Qoqodala District: Nzolo, Xusha, Lalini, Mannelspoort
2.	Ngganda
3.	AmaQolomba
4.	Upper Hukuwa
5.	Sabalele

4.4 Technology transfer and capacity building actions

4.4.1 Technology-transfer actions

- The director of Rural Support Services presented a paper based on this research report at the WISA Biennial Conference at Sun City on 31 May 2000.
- A number of the findings of this research report were included in a Rural Development Services network document entitled “Water for All – meeting basic water and sanitation needs, June 2000”.

4.4.2 Capacity building

- Rural Support Services field workers were trained in the administering of the questionnaire used for this research.
- Members of community based project Steering Committees and women’s groups were workshopped around the issues raised from the analysis of the questionnaires.

5 MAIN FINDINGS OF THE RESEARCH STUDY

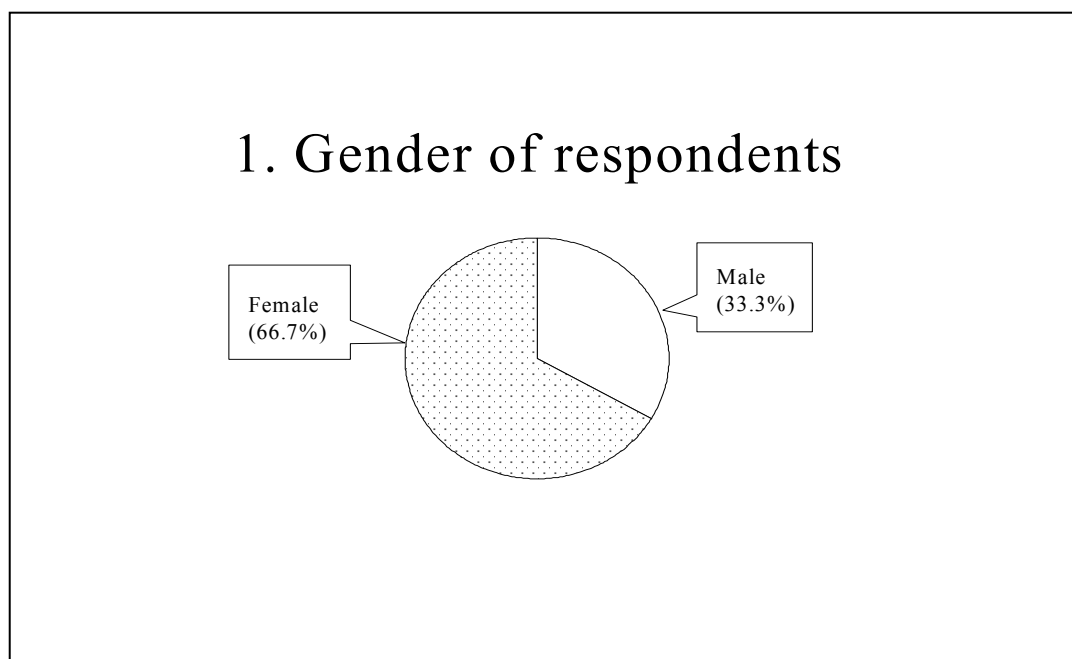
5.1 Household surveys

This section presents the findings of the household surveys undertaken in six villages. These findings are based only on questionnaires. Following sections present the results of the focus groups as well as of individual interviews.

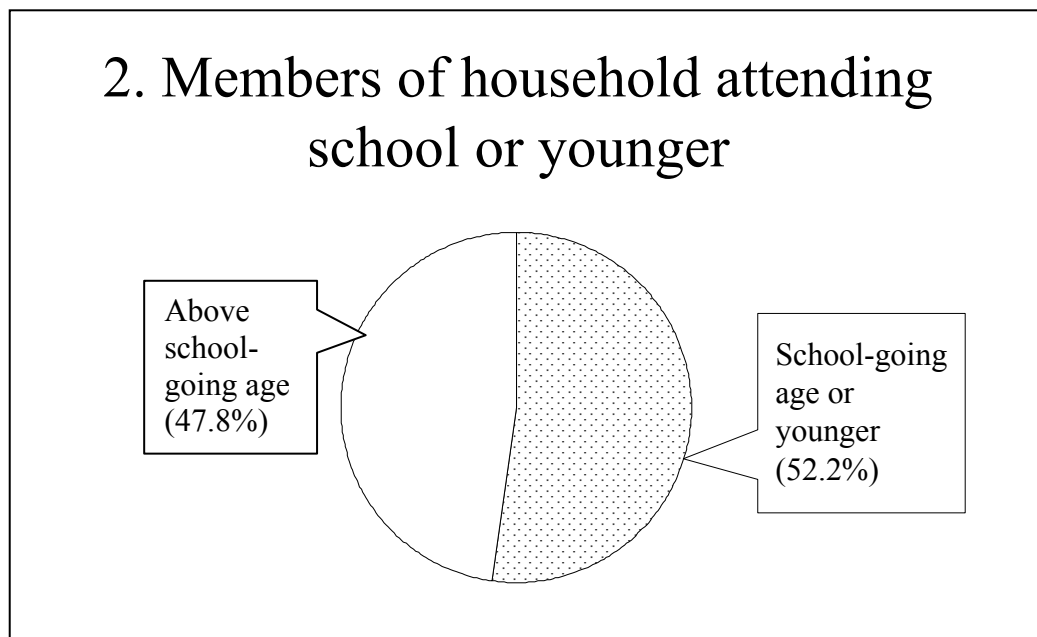
The reader should refer to the tabulated results in section 7.4 for a full statistical presentation of the findings by village.

5.1.1 Household demographics

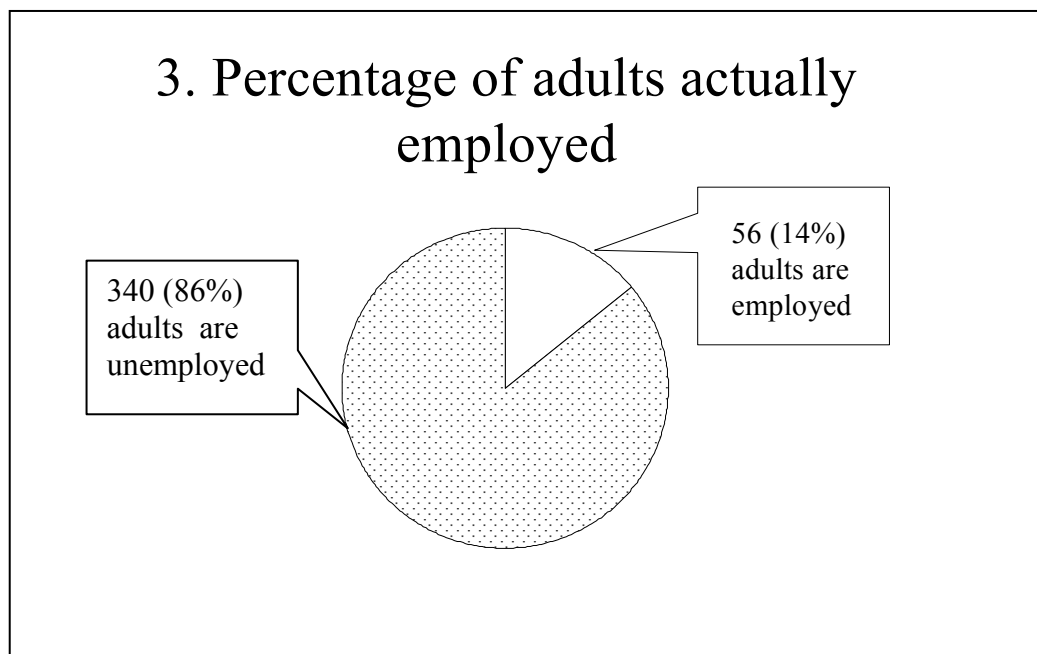
Numbering of the tables refers to the numbering of the original questions. Of all respondents interviewed, 33.3% were men and 66.7% women (see Chart 1, below). Answers to the household survey should be viewed in the light of the preponderance of women in the sample interviewed. This is probably due to the history of migrancy affecting this area which meant that most adult men left for areas where employment was available. The findings on the impact of the water schemes on women are, as a result, also more likely to reflect actual opinions of women.



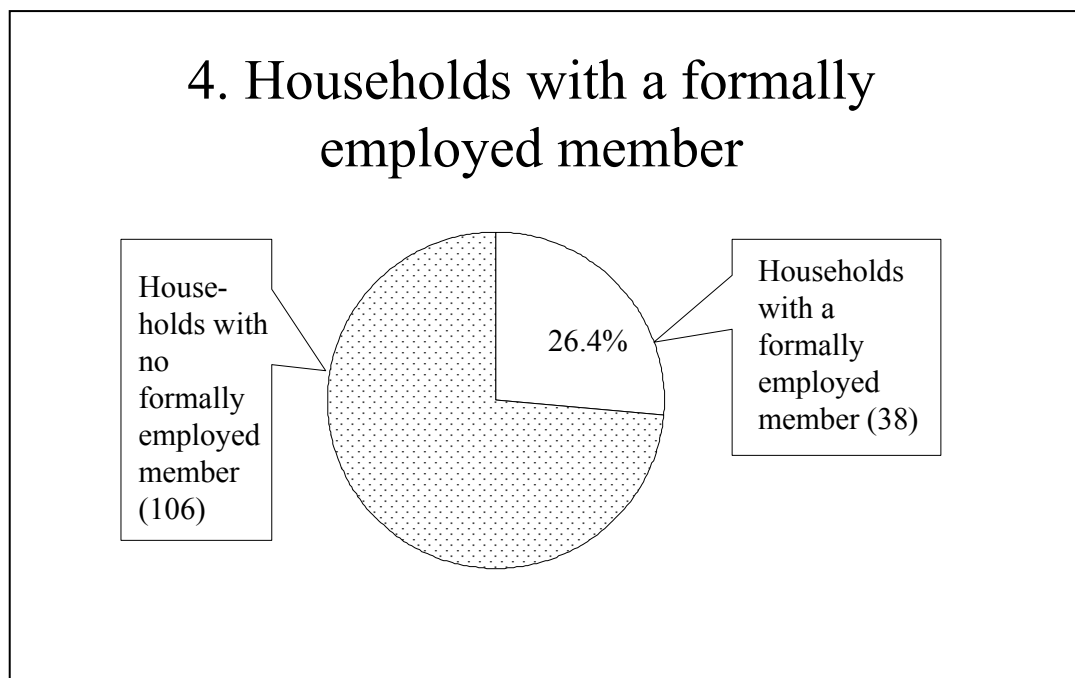
The survey shows that the average number of people per household is 5.75. As is shown below, of the occupants of the households, 52.2% are of school-going age or younger.



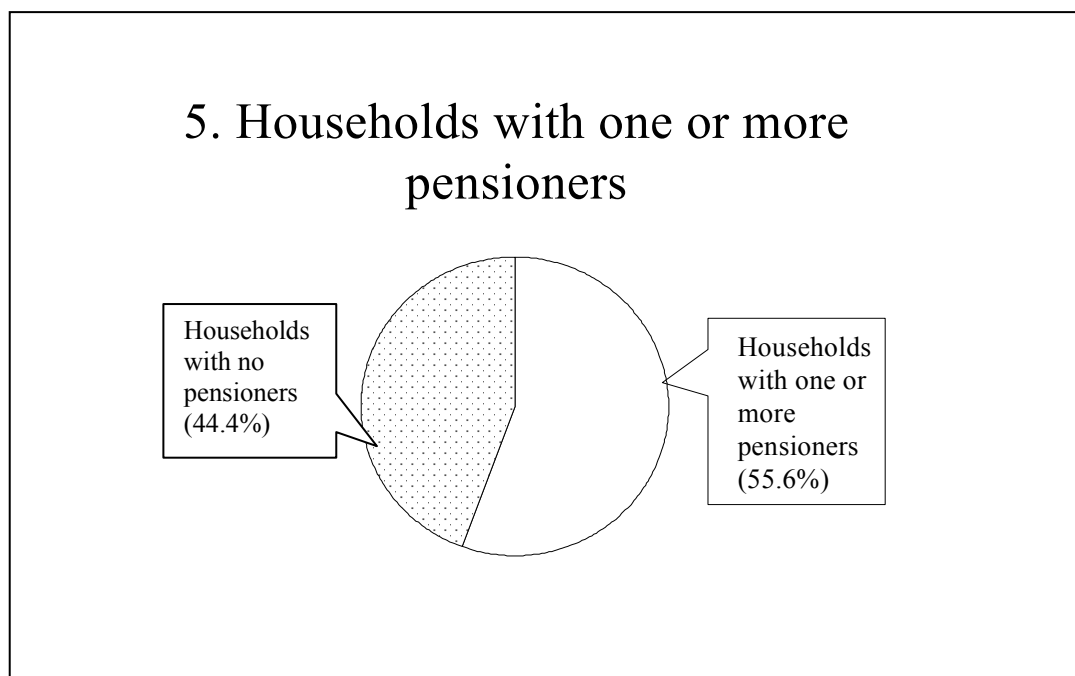
Of the adults currently living in the households surveyed, only 14% (56 of 396) are actually in formal employment (see below).



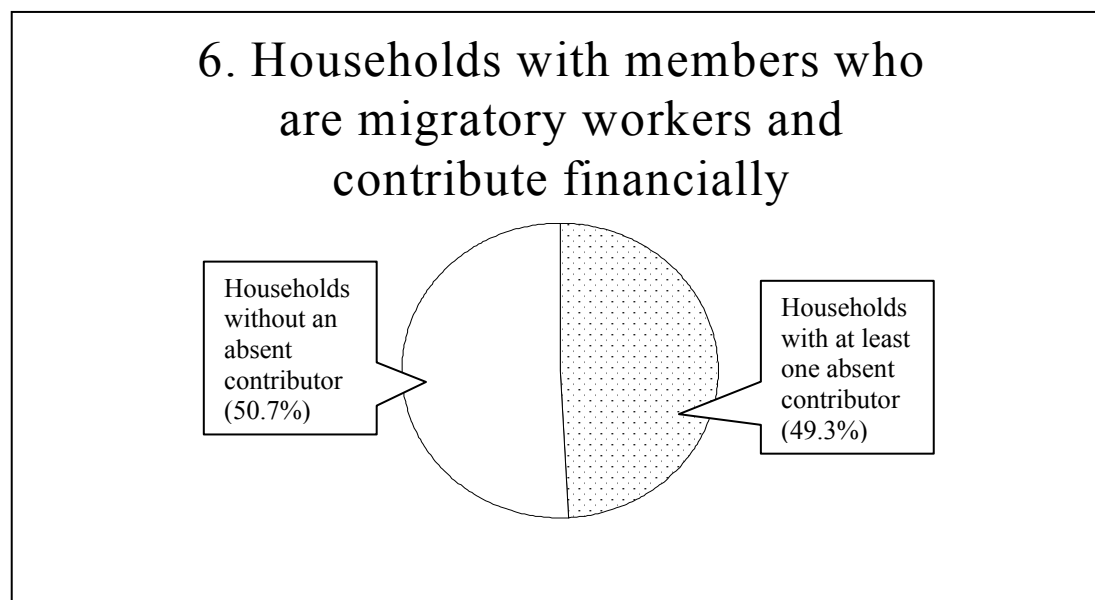
As shown in the table below, of 144 households, only 38 (26.4%) include a resident formally employed person. 60.6% of all adults are unemployed.



The table below shows that 101 of the 396 adults (25.5%) in households surveyed are pensioners and that 55.6% of households depend wholly or partly on a pensioner for support. This fits the pattern in most rural areas, where, given high levels of unemployment, there is heavy dependence on social grants.



The table below indicates that 49.3% of all households have at least one absent contributor. 68.8% of households also have one or more absent member. This is to be expected given the historic levels of migrancy in rural areas. Given the high unemployment levels indicated in tables above, this also tends to indicate a high level of dependency on family members who are migrant workers as well as on social grants and pensions.



5.2 Sources of water before 1995 and now (1999)

5.2.1 Before

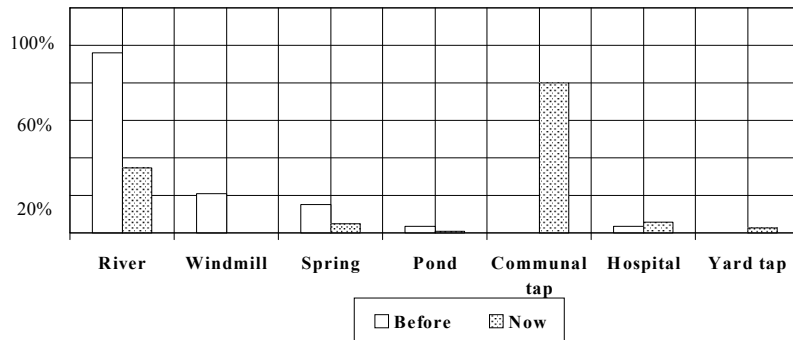
A majority of households interviewed had no source of clean water prior to 1995. 95.8% identified the river as their main source of water before a water system was installed, while 20.8% used a windmill, 15.3% a spring, 3.5% a pond or dam and in Ngqanda, the local hospital. Rainwater harvesting (roof tanks) got the lowest rating at only 0.7%.

5.2.2 Now

79.9% of respondents said that they now get their water from a communal tap while 34.7% still get some from the river. In Ngqanda, 5.6% get it from a local hospital. Others still use alternative sources of water, e.g. 4.9% a spring, 1.4% rainwater and 0.7% a pond or dam. Those indicating that they obtain water from communal taps may however also continue to get water from traditional sources such as rivers and springs. This is clear from responses to later questions that show that only a minority get all their water from communal taps. Some villages continue to get no water at all from water schemes (see Chart 12 below for explanation). This helps explain the figure of 34.7% still claiming to get water from a river.

See the chart below for a graphic presentation of water sources before and after the installation of the schemes.

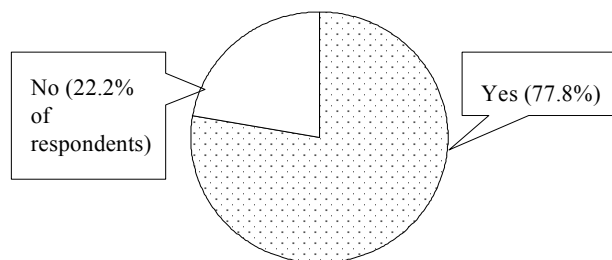
7. Sources of water: before 1995 and in 1999



19 out of 20 households in Xusha continue to get water from the river while also getting it from communal taps although there seems to be no problem with the scheme. Reasons for this were investigated in a focus group [see Section 8.3 below].

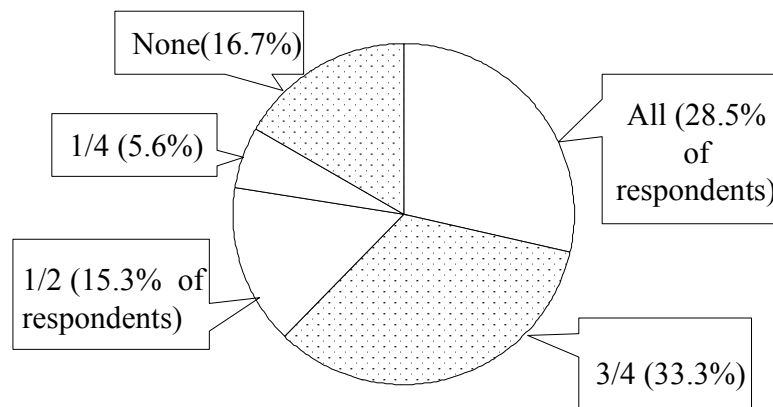
As shown by the table below, responses to question 2.2 indicate that 77.8% feel that it is now easier to get water. Only 22.2% of respondents disagree with this statement. This is an indication that installation of water schemes has made an appreciable difference to the lives of a majority of village inhabitants. The 22% who disagree that it is now easier to get water are, in all likelihood, resident in a village where the scheme is not operational at all.

8. It is easier to get water now



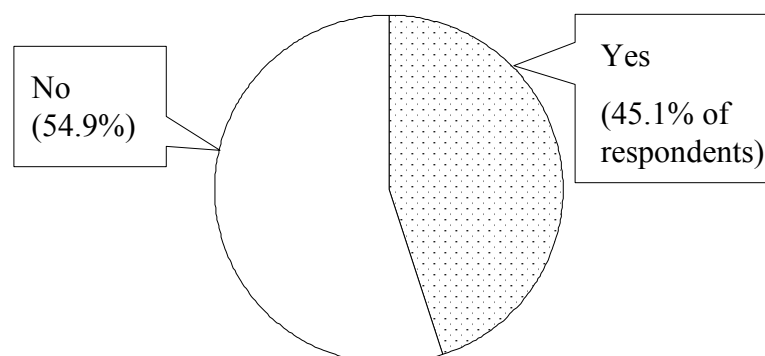
As the table below shows, while a majority feels that it is now easier to get water, only 28.5% of respondents say that they now get all their water from a scheme. Another third get three quarters of what they need, while 16.7% still get none of their water from a scheme.

9. Amount of water respondents get from the scheme

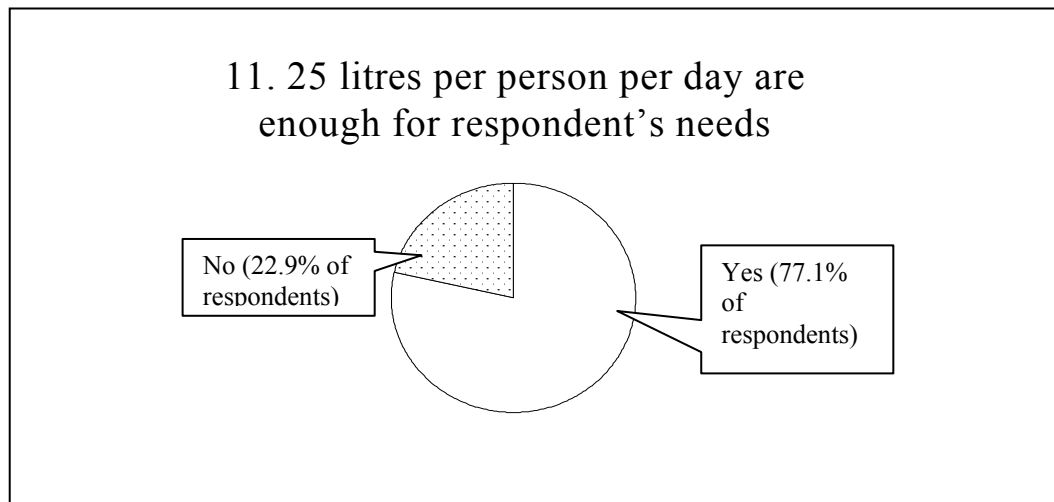


While Government policy aims at a daily allowance of 25l of water per person, the table below shows that, for one or other reason, this allowance is only available from a scheme to about 45% of respondents interviewed.

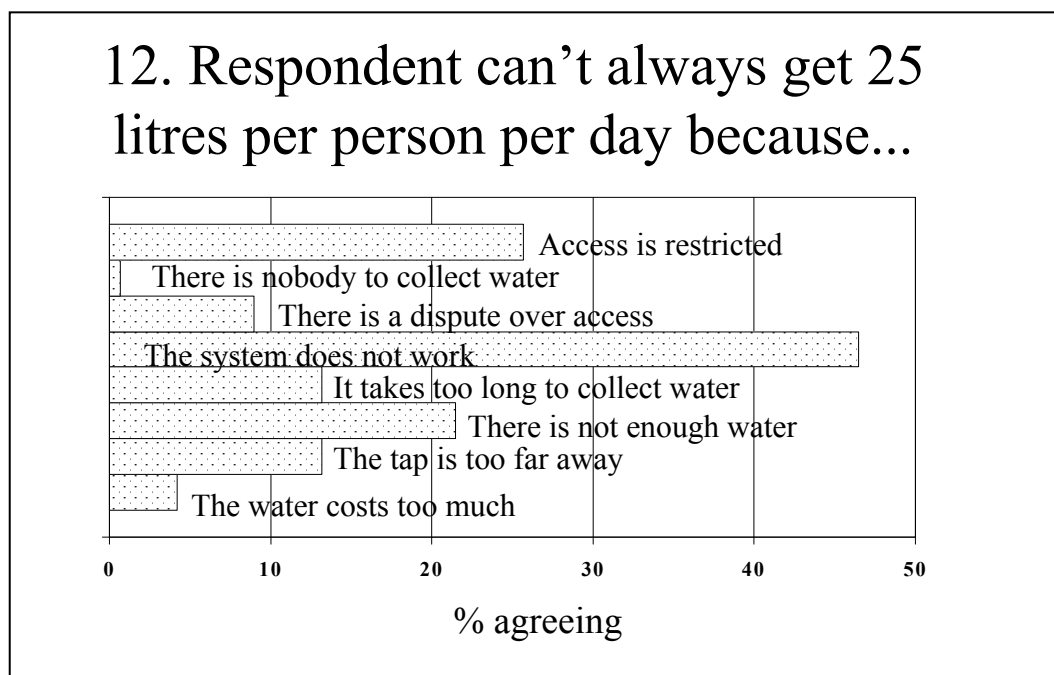
10. 25 litres per person per day is always available from the tap



While 53.5% say that 25l/day/person is not always available from a scheme, a high proportion of respondents (77%) agree that this daily allowance would be enough for their needs (see chart below).



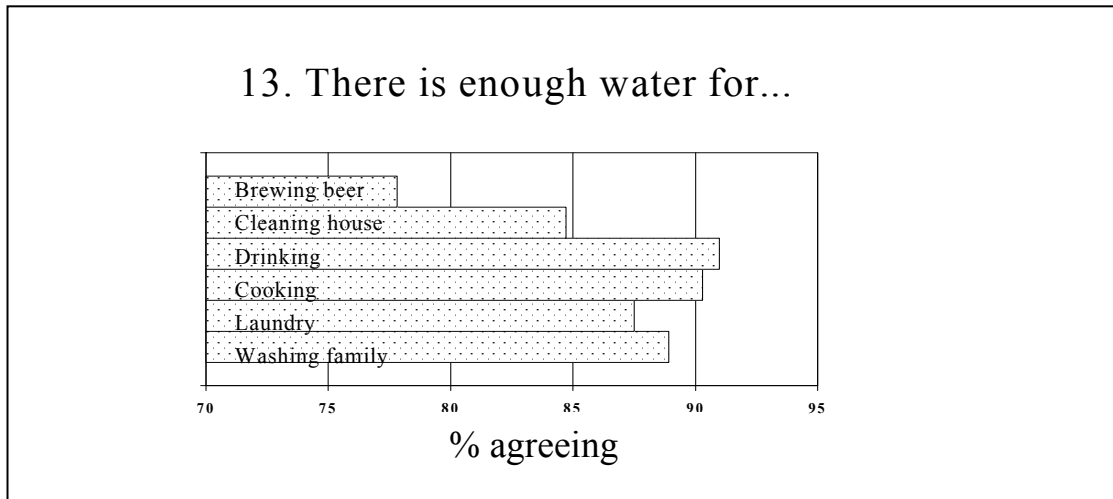
Key reasons given for the non-availability of 25 litres per person per day include: that the system doesn't always work (46.5%), that there is insufficient water (21.5%) or that for various reasons, access to the system is restricted (25.7%). See chart below.



Responses to question 2.6 indicate that in Upper Hukuwa and Sabalele, 19 and 17 respondents respectively, say that access to water is restricted. Reasons given include that the system doesn't work (Xusha). Whether this was because of technical problems or due to non-payment, was investigated further in a focus group.

Responses to question 2.7 (see below) demonstrate that, for basic household or domestic uses, people get enough water. For other uses, little or no water is available from the schemes. This raised a further important issue for consideration in the focus groups. Given that water schemes are among the few significant inputs of

development resources to rural areas, should more consideration not be given to their potential for kick-starting local economic development? It would be important to consider whether policy should be modified to allow additional water to be supplied to allow for rural communities to undertake subsistence or income generating activities.



While the majority of respondents feel that they have enough water for most domestic purposes, it should be borne in mind that rural communities such as these have grown accustomed to surviving on a minimal supply of water. Their acceptance of the current levels of provision as adequate is thus probably based on relatively low expectations. This becomes clear when the 25 litres per person per day standard is compared with internationally accepted standards for basic water needs. The minimum basic freshwater requirement (BWR) as established at the 1992 Rio Earth Summit, is 50 litres per person per day. This allowance is seen as necessary irrespective of the individual's economic, social or political status.⁵⁸ A recent article estimates the average water use in a middle class South African household. Flushing the toilet uses about 13 litres; taking a bath: about 120 litres; taking a short shower: 60 litres; a dripping tap: one litre every 20 minutes; washing dishes in the sink: 18 litres; using an automatic washing machine: about 265 litres per load; washing a car with a hosepipe: about 300 litres; watering the garden for an hour: 900 litres.⁵⁹

Although current policy determines that consumption should be 25 litres per person per day, most of these rural water schemes have in fact been designed to supply 60 litres per person per day. Should an amount in the region of 60 litres be affordable to the average rural household, this could be used as an input into a variety of local small enterprises and make a significant contribution to rural livelihoods in particularly deprived areas. Relatively limited additional state support to allow for this level of consumption to be affordable might allow for a significant additional boost to local economic development.

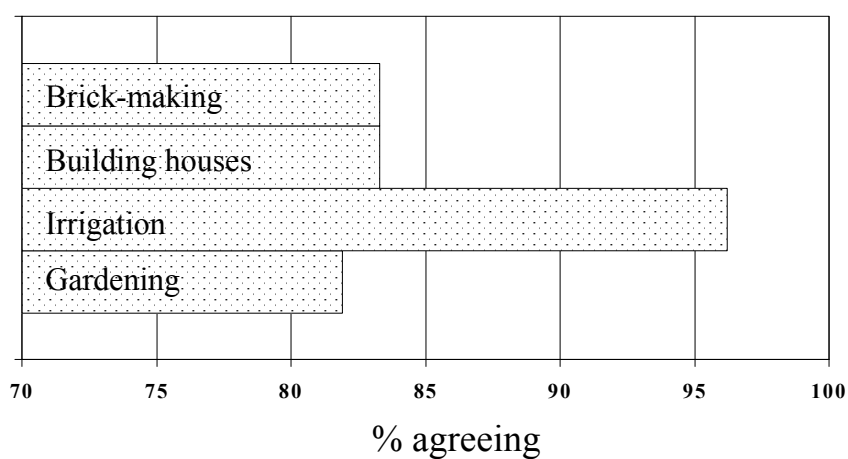
The table below shows current limits imposed by water availability on local economic development. This indicates that, for most respondents, simple economic activities

⁵⁸ The BWR is made up of the following quantities (in litres) per person per day: drinking (5), sanitation (20), food preparation (10), bathing (15) [Source: WHO].

⁵⁹ du Toit (2000)

such as brick making, house building and subsistence agriculture are constrained by limited availability of water from the schemes⁶⁰.

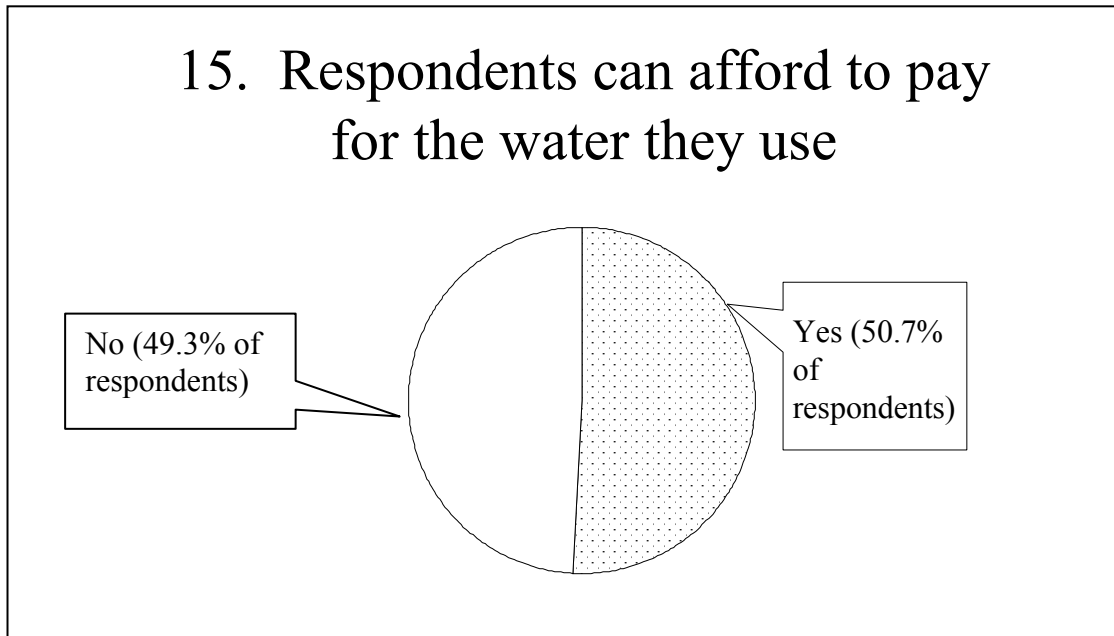
14. There is *not* enough water available for...



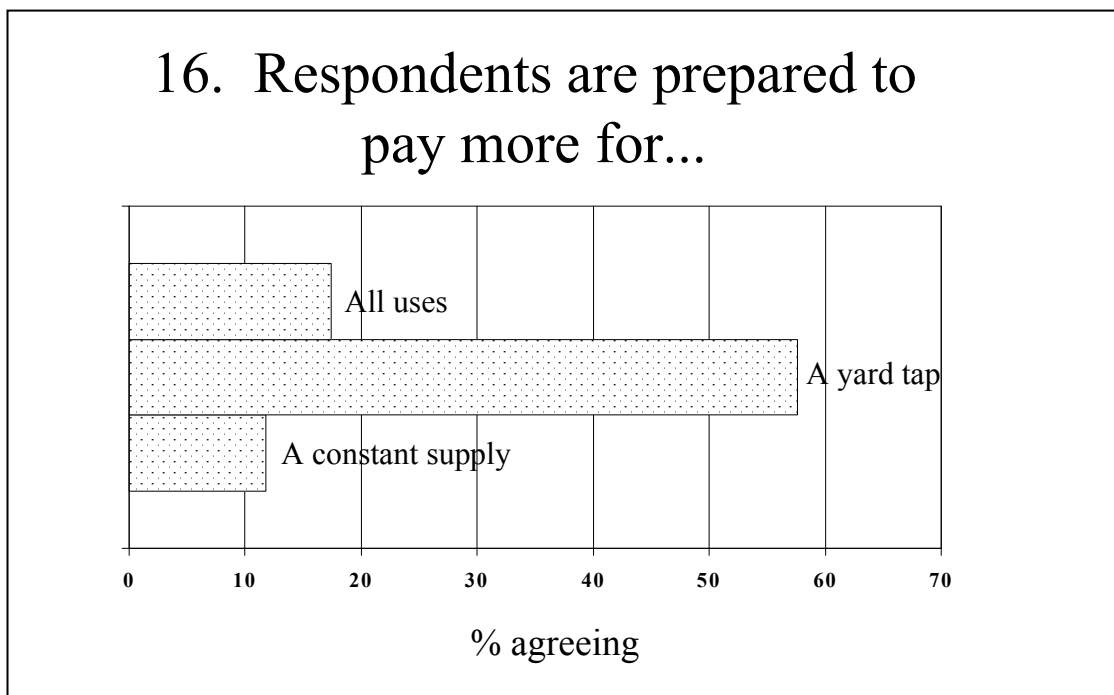
⁶⁰ While water from the schemes is sufficiently pure to be potable, none of the water in the schemes surveyed actually undergoes any purification process.

5.3 Tariff levels

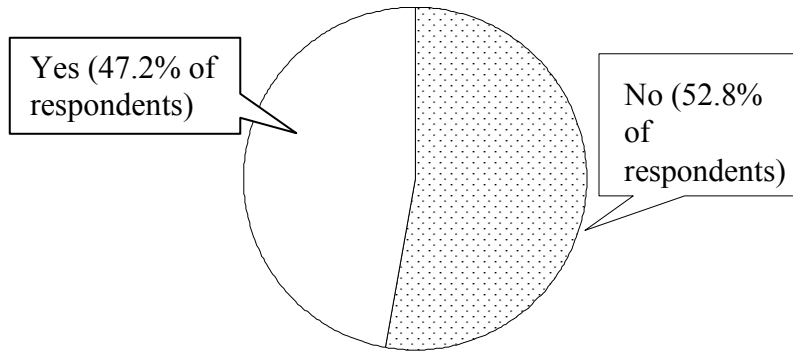
Responses to question 3.1 indicate that the average household tariff paid for water is R8.18 per month. On the question of affordability (3.2), respondents are about evenly split, 50.7 % feeling that they can afford to pay and 49.3% saying they cannot.



Preparedness to pay also seems to depend on the level of service that the respondents feel they want. Answering Question 3.3 (see below), 57.6% say they are prepared to pay more for yard connections, but only 17.4% for other uses such as irrigation and 11.8% for a constant flow of water from a communal tap.



17. Respondents are prepared to pay more for other uses



Answers to question 3.4 (see chart above) show that a majority are unwilling to pay more for additional uses. A private tap on one's own property seems to be the one exception in which greater expenditure on water is acceptable to the majority.

It should be noted that in the case of Ngqanda, only one respondent spends any money on water at all - in this case on the running costs of a private borehole. Otherwise nobody in the village contributes to the water scheme. 11 out of 17 respondents (65%) claim that they cannot afford to pay in this case.

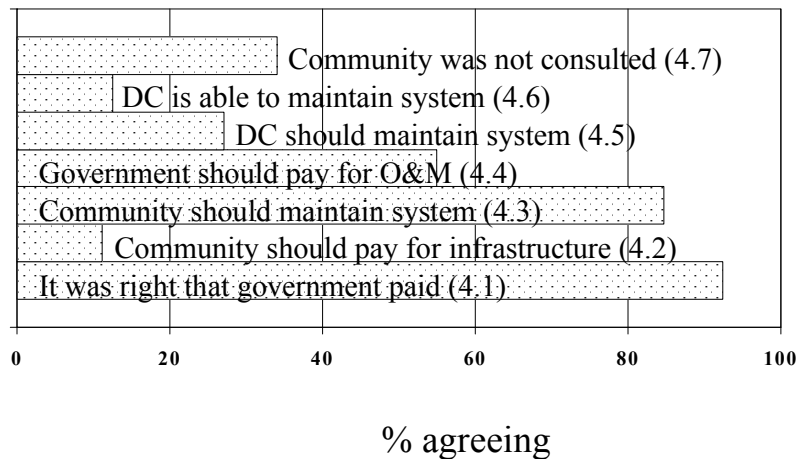
It seems clear from the responses that there is a greater willingness to pay for a service that will deliver water on respondents' private property. There seems to be less willingness to contribute more to the cost of communal facilities where consumption is out of the control of the individual and non-contributors can make use of the scheme. This indicates a willingness to make a greater monthly payment if people can be sure that they get what they pay for. Measuring individual use at a yard tap however also implies that water meters are required and consequently, a higher level of investment in infrastructure. In all likelihood this will also mean higher charges and the danger that the scheme becomes less affordable.

In Question 3.5, 28.5% of respondents said they made a cash contribution towards building of infrastructure although our information is that this was not the case. This was probed further in focus groups. 60% of respondents say that they worked for a small wage on the project while 13.9% said they worked voluntarily. 5.6% indicated that they contributed material to the building of the project.

5.4 Agree or disagree statements (4.1 - 4.32)

This is the most informative and important section of the study with respect to perceptions of government policy in rural areas.

18. Respondents agree that...



Questions 4.1 & 4.2

Question 4.1 indicates that an overwhelming majority (92.4%) feels that it was correct that government paid for basic infrastructure. In 4.2 84.7% disagreed that the community should pay for this. This also indicates that most respondents see it as government's role and responsibility to provide basic infrastructure.

Question 4.3

While believing that government should pay, question 4.3 indicates that 84.7% accept that the community should maintain the system. Whether this implies just doing the work or funding it as well, needs further investigation. Possible assumptions further investigated in the focus groups included that:

- a) the community is confident of doing O & M work
- b) it is ready to take on service provider status
- c) due to high unemployment it would like to preserve or create permanent jobs for local people, not "outsiders"
- d) there is significant identification with the scheme and a feeling that they should maintain & protect it.

Question 4.4

Responses to 4.4 indicate that 54.9% agree that government should pay for the operation and management of schemes. Reasons for this attitude were investigated further in focus groups.

Questions 4.5, 4.6

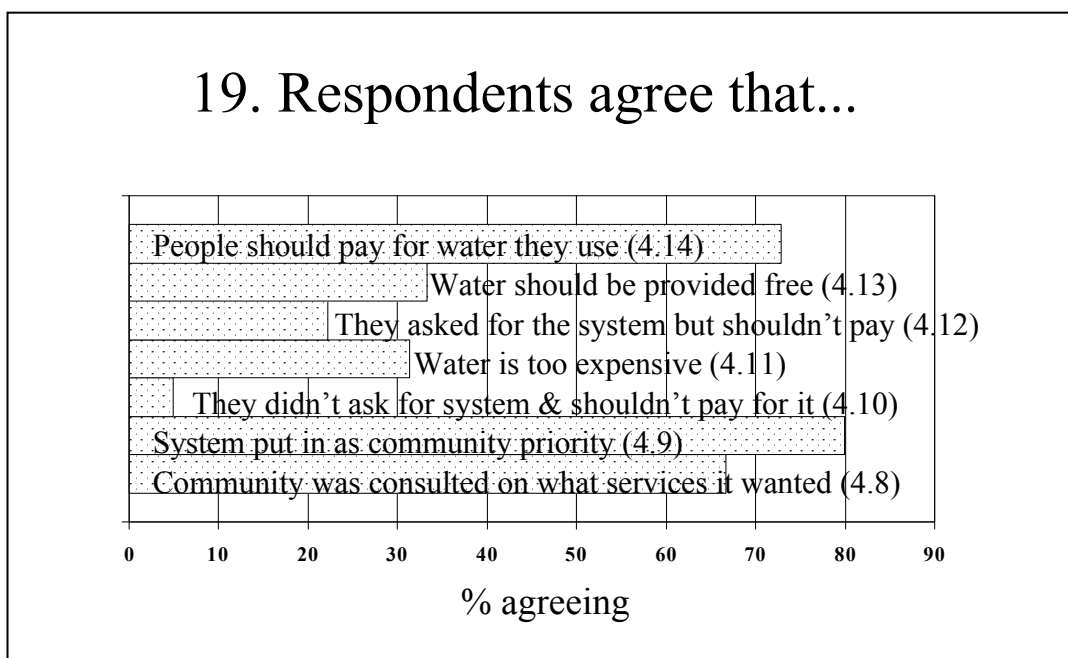
Responses to 4.5 & 4.6 indicate that, as far as the provision of water is concerned, local and district authorities do not enjoy the confidence of the people on the ground

or are not known to them. This may be due to their limited role thus far in implementation and operation and management of these projects or their lack of visibility in rural communities. It should be noted that in all but one of the villages, community structures initiated water projects themselves and accessed government funding via various NGOs and implementing consultants.

It is important to note that, given current resource constraints and the low level of development of local democratic institutions, this situation is likely to persist for some time. A fundamental institutional component of local service delivery is therefore likely to be weak or absent for the immediate future.

Questions 4.7, 4.8, 4.9

A substantial amount of community participation and control in water delivery seems to be confirmed by responses to these questions. 54.9% and 66.7% respectively, agree that they were consulted while 79.9% agree that they had identified water as their priority.



It should however be noted that responses from the majority of residents in Ngqanda indicate a general disenchantment with the scheme and a feeling that residents were not consulted over it. This could relate to the fact that the scheme in this village was fast-tracked with limited consultation before the 1994 general election. 65% of respondents in Sabalele also feel that they were not consulted prior to implementation. In both the above villages majorities feel that water should be provided free of charge. These issues were investigated further in focus groups.

Question 4.10, 4.11

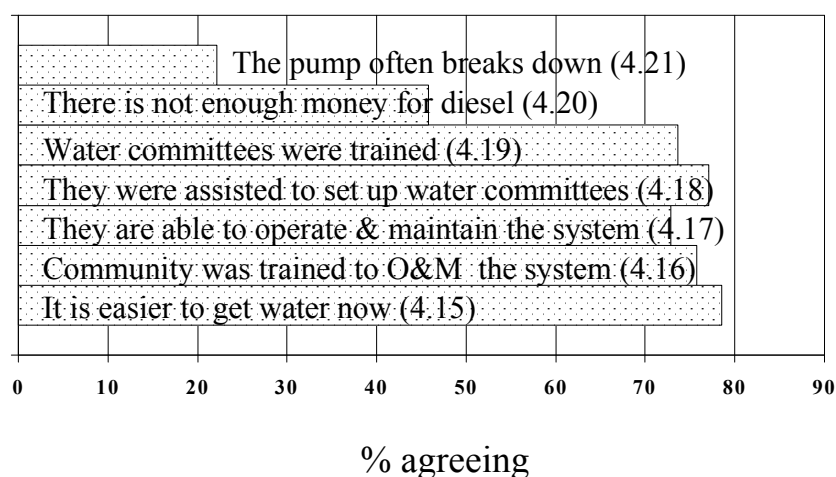
Questions 4.10 and 4.11 relate to payment for water services. Only 11.8% feel that they did not ask for the service and should therefore not pay for it while only 38.2% feel that water is too expensive. Responses to questions 4.10 (88.2%), 4.12 (70%)

and 4.14 (73%), indicate clearly that the majority understand and accept the need to pay for water and do not believe it is too expensive. Whether they can afford to pay is however a separate matter.

Question 4.13, 4.14

4.13 and 4.14 indicate that a majority (61.8% and 72.9%) feel that water should be paid for. However, the fact that another third feel it should be provided free could indicate that there is either a substantial affordability problem, or that they believe that there should be a right to free water (e.g. where the community traditionally got it for free as was the case in Ngqanda).

20. Respondents agree that...

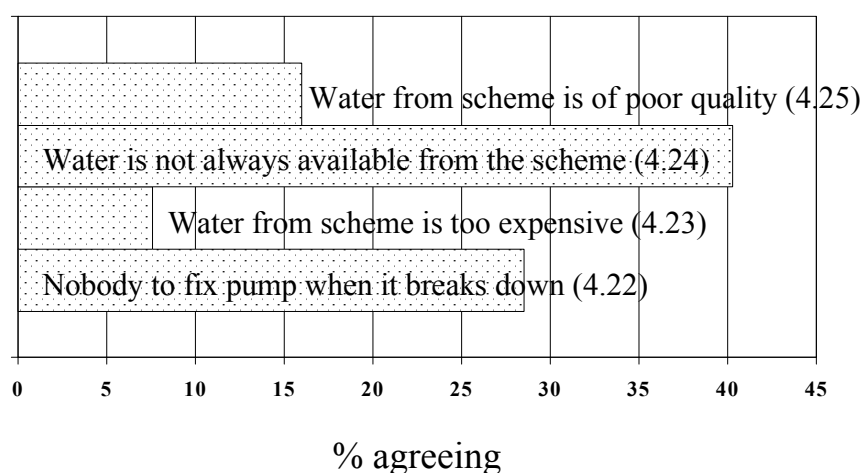


Responses to 4.15 show that an overwhelming majority (78.5%) feel that it is now easier to get water.

Questions 4.16 - 4.19

In responses to questions 4.16 - 4.19 it becomes clear that there is generally confidence in the ability and capacity of water committees. What comes out of this is a picture of water committees that are trained (75.7%) and able to operate and manage projects (72.9%), and which were set up with the help of implementing agents and NGOs (77%). Fundamental issues, further investigated in focus groups, were the sustainability and continued commitment of these management structures.

21. Respondents agree that...



Question 4.20 - 4.25

The responses of people to questions 4.20 - 4.24 (see charts above) give an indication of the financial and structural/technical sustainability of these projects. Over 50% agree that there is not enough money for diesel (4.20) while only 26.4% agree that there are often breakdowns (4.21). Almost 60% disagree that there is nobody to fix pump breakdowns (4.22). These responses seem to indicate that shortage of funds to pay for fuel, rather than technical issues, is a problem. Although over 50% agree that there is a shortage of money for diesel, most (91.7%) disagree with the assumption that water is too expensive (4.23). About 40% of respondents agree that water is not always available from the scheme (4.24). This seems to indicate that there is a substantial problem somewhere in the delivery process. The majority (82.6%) are however satisfied with the quality of water from the system (4.25). Those dissatisfied with water quality come mainly from a village where, due to problems with the scheme, water is still drawn from the river.

To summarise: technical problems do not seem to present substantial problems; the lack of enough money for diesel should however raise concerns. Diesel costs are relatively low in these schemes as only about 25l of fuel are used every three months. There are however other hidden costs such as transport for the diesel. Apparent inability to afford what are relatively small costs indicates that extreme poverty is a key factor in the viability of these schemes. The issue was explored further in the focus groups.

NOTE:

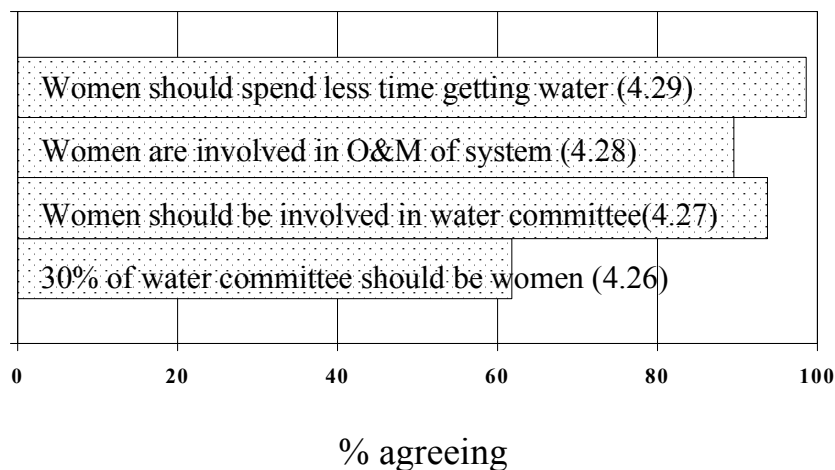
It became clear during the interview process that more research was needed into the appropriateness of technology used in some of the villages and on the nature of consultation around choices made. While some villages opted for relatively economical solutions such as protected springs, others preferred more expensive

options. The degree to which implementing agents influenced the choice of technology was investigated further in focus groups.

4.26 - 4.29

The majority (61.8%) agree that 30% of water committees should be women and there is overwhelming agreement (93.8%) that women should be involved in water committees. This is a notable affirmation of the role of women. It should of course be remembered that two thirds of respondents were women. Of particular importance is the agreement by 98.6% of respondents that women should spend less time fetching water as a result of the schemes. The schemes are clearly responsible for a significant saving on labour time for women in these villages.

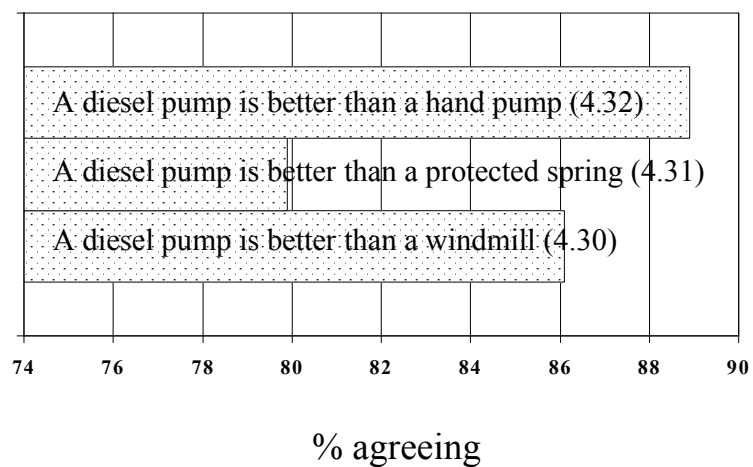
22. Respondents agree that...



Question 4.30 – 4.32

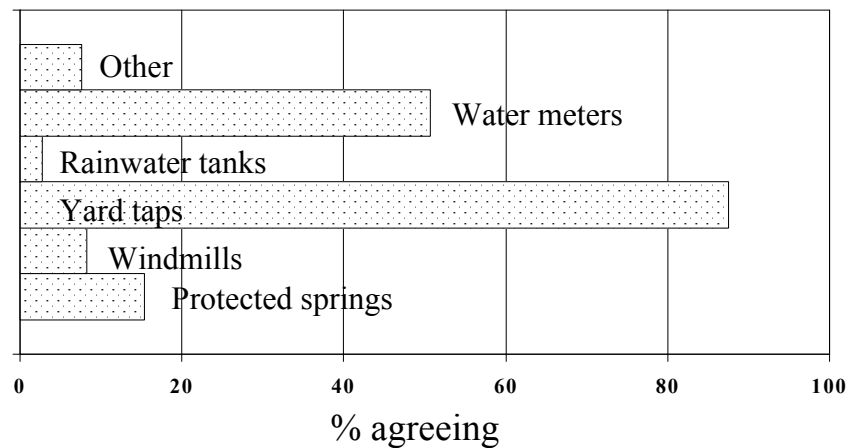
Responses to these questions (see chart below) give an indication of how the respondents feel about different technical options for water provision. An overwhelming majority seems to think that alternative technologies are not appropriate. High percentages of respondents stated that they prefer a high tech option (diesel pumps) to windmills, protected springs or hand-pumps. This is despite the fact that, given resource constraints, these would have been cheaper and simpler to maintain. This would seem to indicate that rural communities prefer more sophisticated schemes, which they identify with a better quality of service and modernity. In one case (Lalini), 16 respondents out of 20 however now think that a protected spring would have been a better option than the diesel pump that they agreed on. The issue of how different technical options were explained to communities was raised in focus groups.

23. Respondents agree that...



5.5 Recommendations from respondents

24. Respondents recommend the following to improve water supply...



Question 5.2

This section (see chart above) deals with recommendations to improve water supply. The most significant outcomes were the emphasis on installing yard taps (87.5%) and on a linked issue, the metering of individual use (50.7%). Use of protected springs was suggested by only 15.3% of respondents. Other suggestions are of relatively minor importance.

The indication is that people prefer a system where they control their own tap and know how much water they use. The additional costs involved in installing site taps with meters may however exacerbate the affordability problem. An example of this is a delayed Mvula Trust water project at Shiloh near Whittlesea, where the community was unable to afford the installation charge of R400 per household required for individual on-site connections. According to Andrew Macdonald of the Trust, the Shiloh community was the first to ask for house connections⁶¹.

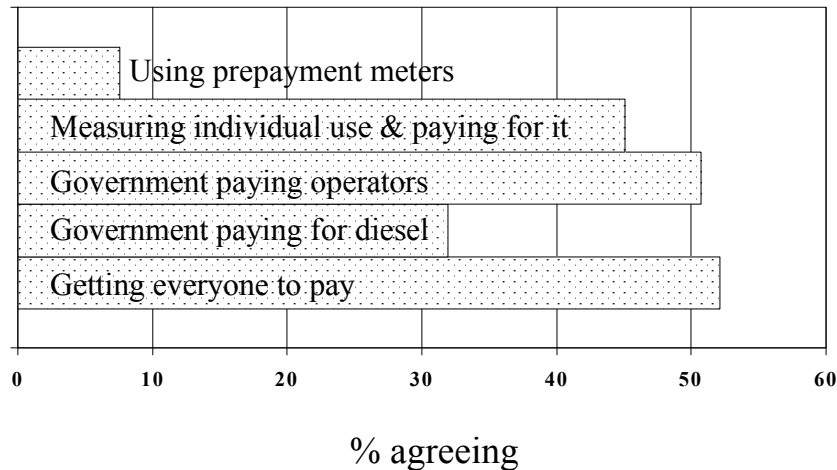
Question 5.4

Suggestions for improved management of water schemes (see chart below) include: ensuring that all members of the community pay (52.1%); getting government to pay for operators (50.7%); getting it to pay for diesel (31.9%) and ensuring that consumers only pay for water use actually metered (45%).

The idea of prepayment meters on taps was only supported by 7.6% of respondents. This is probably due to a lack of experience of the pre-payment meter system. Another problem might be that respondents fail to understand why they should pay for the use of water prior to its consumption.

⁶¹ Daily Dispatch (2000)

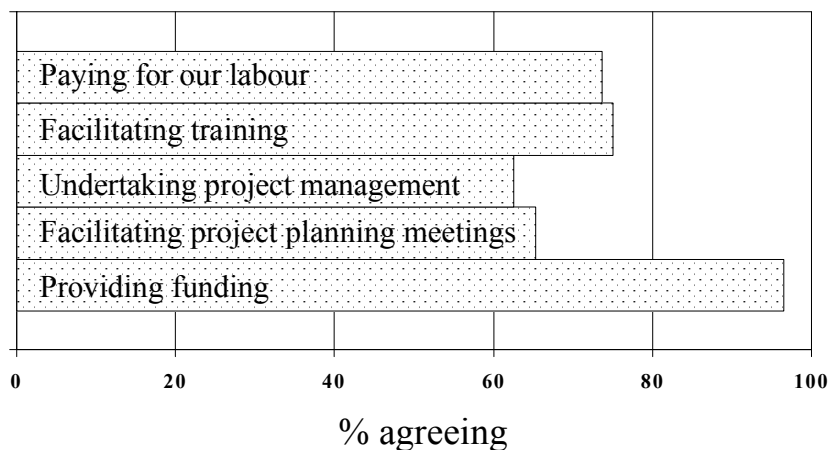
25. Respondents' proposals for improving the management of the water supply:



Question 5.5

This sought (see below) to establish user views on how government and consultants or implementing agents helped in the project. 96.5% said they helped by providing funding, 75% by providing training, 73.6% by providing payment for labour, 65.3% by facilitating project meetings and 62.5% by facilitating project management.

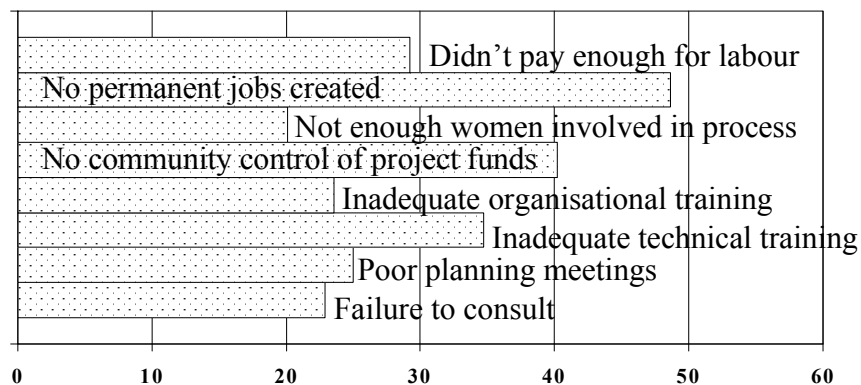
26. The Government/implementing agency assisted by...



Question 5.7

This relates to problems identified by the communities in dealing with government or its agents (see chart below). 48.6% of respondents were concerned that permanent jobs were not created by the schemes. This seems to indicate that unrealistic expectations were created in the minds of a substantial number of respondents who saw the scheme as a job creation programme as well as a way of obtaining clean water. 40.2% felt that there was lack of consultation over project funds and budgeting of funds. This could relate to concerns over affordability and was examined further in focus groups. 34.7% felt there was not enough technical training for participants, while 29.2% complained that there was not enough payment for labour. Concerns over insufficient technical training might relate to issues of maintenance and sustainability but also to job creation. This was also looked into in focus groups.

27. Problems with the Government/implementing agency:

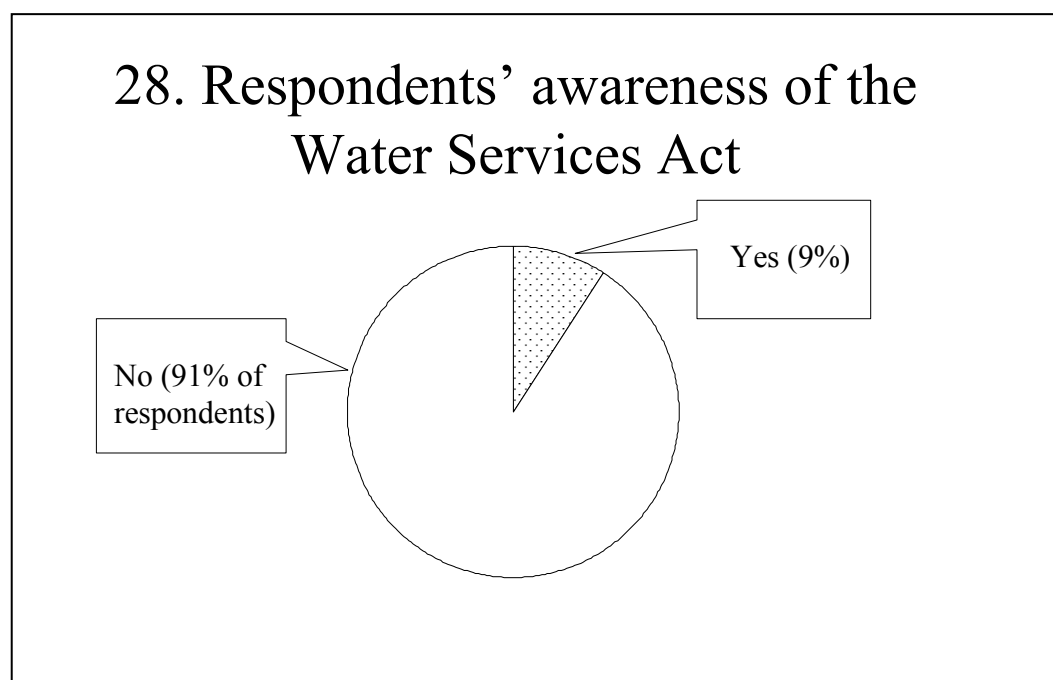


25% felt there was not enough project planning with the community and 23.6%, not enough organisational training. 22.9% felt there had been no consultation over the scheme while 20.1% felt that insufficient women were involved.

5.6 Awareness of the Water Services Act

Question 6.1

This dealt with awareness of the Water Services Act. The findings reveal that this is very low in all the villages with only 9% of all respondents saying they are aware of it. This may be due to the fact that almost all the projects were implemented before the Act was in place and the debate around it finalised.



Question 6.2

The only significant element of the act understood by anyone was the entitlement to 25l of water per person per day. This was only known by 6.3% of respondents. All other issues raised were of minimal statistical significance. It is clear that almost all respondents are unaware of their basic water rights.

5.7 Respondents' main concerns

Question 6.3

The following concerns were spontaneously raised by respondents but were not of any statistical significance (similar issues have been grouped)⁶²:

Insufficient water (7.7%)

We need another dam (1.4%)

The need for yard taps (6.3%)

Taps are too far away (2.1%)

Poor O&M by those employed to do the job (4.2%)

The operator is paid for doing nothing (2.8%)

Nobody is in charge (1.4%)

⁶² Issues considered of significance were clarified further in the focus groups.

Vandalism of community taps (3.5%)

Danger of damage to the engine (1.4%)

Difficulty of replacing a broken engine (3.5%)

Community cash contributions (10.4%)

The need for people to pay (4.2%)

Punishment of defaulters (2.8%)

Non-payers using more than those who pay (2.1%)

Need to make provision for indigents (2.1%)

Not enough diesel for the pump (8.3%) [issue of insufficient funds?]

Wages for the operator (6.3%) [issue of insufficient funds?]

Government should help pay the operator

Affordability (1.4%)

Government should run the engine (10.4%)

Water for irrigation (5.6%)

Water for stock (1.4%)

5.8 Focus groups

Results presented under section 4.1 above are from the household interviews. Based on these, questions were formulated for focus groups (see section 7.3 below for how the groups were constituted, details of the questions and agenda followed).

During the initial planning stages for the focus groups, three potential interest groups were identified: water committees; women; and youth. Due to logistical and time constraints, the groups were eventually constituted of members of water committees alone. These committees are however broadly representative of the demographics of the villages. Focus groups were held for participants from all the villages. In Qoqodala a joint focus group of water committees from the four target villages, Lalini, Mannespoort, Nzolo and Xusha, was conducted. Despite prior organisation, the turnout was poor. We nevertheless proceeded with the group.

The focus group format allowed for a more interactive approach. This yielded more information, especially on areas where our understanding was inconclusive on the basis of the household interviews alone.

5.8.1 Issues arising from the focus groups (brainstorming sessions and village-specific questions)

In the brainstorming sessions the facilitators sought to engage the participants in a participatory process to come up with key issues thought to affect water delivery. Village-specific questions were designed to clarify further responses received to the household survey.

Key issues identified by village are:

5.8.1.1 Qoqodala (Lalini, Mannespoort, Nzolo, Xusha):

There seems to be an operation and management problem in Lalini. Symptoms of the problem include:

- ❑ The maintenance team is alleged to lack repair skills
- ❑ A pipe has burst but there are no fittings to repair it
- ❑ Some people are not paying the monthly charge as they think that R5 is too much. According to the participants, while there is enough money to buy diesel, those who do pay will not allow it to be spent until everyone pays. They will not subsidise non-payers and as a result no water flows. According to participants in the focus group, about 40% of the community are non-payers.

Other general issues identified in Qoqodala are:

- ❑ A general problem of poor participation in water committees and poor response when meetings are called. Non-payers in particular do not attend. This problem is experienced both in water committees and general meetings. No cases of vandalism have however yet been reported.
- ❑ After the project was completed, a new committee was elected. This committee is however not functioning, and former committee members are forced to attend to and take responsibility for water issues. The problem is that when committee members changed, there was no transfer of skills. Although the outgoing

committee arranged for a mentoring period for the new committee, the new members never showed up. There is obviously unwillingness on the part of the new committee to take responsibility.

- ❑ Lack of recourse if people do not pay. There is nowhere to report defaulters.
- ❑ Since there are alternative sources of water (the spring and river), people are not that concerned if the scheme is not working as they can still get water.
- ❑ Metered yard taps are seen as a solution to non-payment, although this might mean that non-payers are cut off. There is concern that this might result in widespread vandalism of reticulation lines by those unable or unwilling to pay.
- ❑ Participants feel that the government should collect charges, but should employ local people to do this.
- ❑ Another concern is over whether government will be willing to fund the installation of yard taps, as the majority do not have the money to do so. The participants specifically asked the facilitators to raise this issue in the report.

Apart from Lalini, there are generally no problems with water service availability in the other three villages visited in Qoqodala. The problem in Lalini is not to do with infrastructure but rather due to the refusal to pay the monthly tariff as agreed by the community.

In 4 of 6 of the villages surveyed the village committees remain unchanged. The same people who served during implementation still make up the committees. This is a result of reluctance by other members of the community to serve on the committees. Where new committees have been elected, there seem to be problems. In the case of Mannelspoort, while a new committee was elected, there has not been any transfer of skills. In Lalini the original committee had offered to serve a mentoring period with the new committee to facilitate a smooth transition. The new committee however met this offer with indifference. Given long-standing payment problems in the village they appear unwilling to take over responsibility from the old committee. There has, in this case, seemingly been a problem of apathy ever since the water scheme was commissioned.

5.8.1.2 Ngqanda

Ngqanda is one of about 60 sprawling villages surrounding the nearby town of Lady Frere in the former homeland of Transkei. With the proclamation of new boundaries it now falls under Stormberg District Council. The water scheme was put in place by the then Transkei government, and when the village was visited, it was not in operation.

The community is apparently divided politically. Divisions were originally between those who supported the chief and those supporting democratic civic organisations. According to the focus group, which consisted of the water committee and local women, the situation has now been further politicised. Those who support the headmen are now members or supporters of the UDM. The civics and water committee members are members or supporters of the ANC and its allies.

This division presents problems as far as the sustainability of the water scheme (and all other development projects for that matter) is concerned. In addition, the community has never been asked to contribute anything to the operation and

maintenance of the water scheme since it became operational. The onus has always been on the government to supply diesel and send its employees to do repairs.

To conclude, it is clear that the dispute has become political. Because of this, people are suspicious and reluctant to talk to strangers. The implications for operation and maintenance do not look good, as it is difficult to decide on any issue as a unified community.

5.8.1.3 Hewu District (Ama-Qolomba & Upper Hukuwa)

There were two target groups in this area: Ama-Qolomba and Upper Hukuwa. We initially planned to conduct a combined study of the two villages, but due to the reluctance of representatives from Ama-Qolomba, we conducted separate studies. Hewu is situated about 60 kilometres from Queenstown, in the magisterial area of Whittlesea. These schemes were completed in 1998 and became operational in 1999. Electric engines were the preferred option and they operate automatically. Both the schemes are functioning well and the institutional arrangements are good. For this reason, no specific questions were formulated for the focus groups. Both villages were asked the general questions.

The success of the schemes in these villages seem to be due to a number of key factors including:

- A high level of commitment by committee members
- Cohesive community structures (Ama-Qolomba consists of only 12 households)
- The fact that electric pumps are used and these are cheap and efficient
- A high level of enthusiasm as the schemes in these villages are still relatively new.

5.8.1.4 Sabalele

Sabalele is a sprawling village about 50 km from Queenstown. The nearest town is Cofimvaba, which is about 20 km away. The water scheme was implemented in 1994 under the Presidential Projects scheme. At the time of our visit the scheme was functioning despite financial problems.

During the household interviews, 65% of respondents said that they were not consulted prior to implementation. This question was posed to the focus group as well. They state that they view the scheme as a gift from the government and they need water anyway. With regard to the payment for water, the group understands why it needs to pay for diesel and accepts this in principle. The reality of unemployment is however such that most of the community cannot afford to pay. They are also not aware of any requirement for a minimum percentage of women in the water committee.

5.9 Report on interviews with key stakeholders

A number of interviews were conducted with key stakeholders in the water development sector to get their views on current water policy and its implementation. Respondents included implementing agents, funders, consulting engineers, members of Transitional Rural Councils and District Council.

The interviews were conducted by telephone and some of the targeted respondents could not be reached. The research team had worked out different sets of questions for the different stakeholders. What follows is a generic account of results from the interviews.

5.9.1 Transitional Representative Councils

The TRC representative in all the areas seem to have been involved in the water projects in their initial stages and they sit on the water committees/project steering committees of these projects. They basically see their role as that of intermediary and facilitator between funders and consultants on the one hand, and locally based water committees on the other. Although not sufficiently prepared for that role, the TRCs see themselves as a future conduit for development funding. In this capacity, they also want to be given the power to appoint consultants.

They have not encountered many problems with project implementation. They are however concerned at the slow pace of delivery and also about projects which have been approved but have not yet got off the ground. One member of a particular TRC is concerned there is too much red tape in approving and implementing projects and advocates a bigger role for District Council and TRCs in order that they can effect faster delivery of services.

On the whole, it seems that there is a satisfactory rapport between The TRC representatives and implementing agents, although sometimes they cannot know the details of every project due to the geographical extent of the areas they cover and their numerous other responsibilities.

It should be noted that telephone interviews were sometimes difficult to conduct. In one case, the respondent was not interested in some questions concerning projects, but wished rather to motivate why the district council and TRCs should take control of them. It would seem that in some instances, answers given were tailored to the protection of political turf.

5.9.2 Implementing Agents/Consultants

Consultants were originally invited to participate in projects by the communities through their development forums, or in cases where the TRCs were already in existence, by the TRC itself. The two villages where this process was not followed were Sabalele and Ngqanda. Consultants for the Qoqodala and Hewu villages had previous experience in similar projects. After being appointed a process of consultation got underway. This included feasibility studies and meetings with

communities to assess their needs. In this process, decisions were taken with and by the community on water sources to be utilised and the appropriate technology.

The consultants have conducted training with the water committees/project steering committees at various stages of the projects. The training has included institutional and social development skills, technical skills in project construction, and operation and monitoring. Training is conducted using a training manual, and an operation and maintenance manual is also left with the communities for reference purposes.

The four villages in the Qoqodala area are still undergoing a period of mentorship. In Upper Hukuwa and AmaQolomba, mentorship came to an end at the end of March 2000.

The community decided the tariff for water by consensus. The implementing agent assisted by giving a breakdown of costs so that the community could decide on what was affordable. We were not able to get a response from the consultants who implemented the project at Ngqanda village. According to the water committee there, very little was done in their case to assist in establishing an appropriate tariff.

With regard to the involvement of the local authority (TRC/District Council) in the project, there seems to have been contact in the very beginning as far as Upper Hukuwa and AmaQolomba are concerned. In Nzolo, Lalini, Xusha and Mannespoort there was however at the time no established local authority. The implementing consultant appears to have worked very well with the dynamic local co-ordinator, who is now the TRC representative for the area.

6 CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

The following conclusions are based on the findings of the various information-gathering activities that made up this study.

6.1.1 Demand-responsive and supply-driven approaches

The literature surveyed indicates that government, some NGOs and other rural development and donor agencies, increasingly favour a "demand-responsive" approach to rural water supply. This implies that consumers should only get the quantity of water that they can afford. Supply-driven and centrally directed approaches to rural sector services are said to have little chance of sustainable improvement. Our research however indicates that the demand-responsive approach may not in fact be appropriate. While a demand for higher levels of service is expressed, people do not generally consider this service level in relation to their ability to pay. The demand-responsive approach thus often creates expectations that cannot be met.

A further point is that the same policy may result in significant differences in delivery between urban and rural areas. As Water Affairs Minister Kasrils has stated, disparities between urban and rural water costs are the result of greater economies of scale in the urban areas, and the high capital expenditure required to establish water infrastructure in the more remote country districts. The Minister has argued further that "These circumstances must, I believe, compel us to adjust our pricing structure in a way that benefits the poor".⁶³

The urban approach tends to be one that is "supply-driven": basic infrastructure of a certain standard already exists and is being added to. The poorest rural communities, on the other hand, start with little or no basic infrastructure. They are forced to put up with standards based on "demand" - what they are able to afford. In the absence of an appropriate pricing structure at national level and adequate national cross-subsidisation of recurrent costs, the consequence may be the persistence of minimal and often inadequate service standards in many rural areas. Alternatively, based on "demand", systems may be installed which subsequently turn out to be unaffordable and eventually break down.

6.1.2 Sources of water

The installation of the schemes has in most cases resulted in a major shift in where people obtain their water. Some 80% now state that they obtain it from a communal tap. This is however qualified in that about 55% of respondents state that the RDP minimum of 25 litres per person per day is not always available, while only 28.5% of respondents state that they now get all their water from a scheme. Overall however, the research indicates that the installation of water schemes results in a significant improvement in quality of life for the majority of those affected. Most people now

⁶³ SAPA (2000)

have a safe, relatively convenient source of water for domestic use and this is available most of the time.

The schemes are however not impacting on the remaining 20% who are still forced to obtain water from springs or rivers which are some way away and in all likelihood, unsafe for human consumption. This 20% in fact includes entire villages where schemes have collapsed or work only intermittently. A 20% failure rate for these schemes and the attendant threat to public health, clearly warrant urgent investigation and remedial action by the relevant authorities.

6.1.3 Non-functioning schemes

Our research indicates that reasons for the non-functioning of water schemes are mainly local political disputes and the way in which the schemes were introduced into the community in the first place. In some villages local political divisions make it difficult or impossible for the water committee to keep the scheme functioning. Apparent technical problems such as lack of spare parts for the pump or shortage of diesel also seem to have their origins in these disputes.

In other cases (about 34% of respondents), the scheme lacks legitimacy because the community feels the design was imposed on them without proper consultation or explanation. While a majority is happy with the way they were consulted during the process of implementing water schemes, a substantial minority complains that consultation was inadequate or non-existent. This could be a reason for ongoing operational problems in some villages as members of some communities have no sense of ownership and fail to take responsibility for water supply.

As is indicated in the section below, a further cause of non-functionality is that the water supply is not always adequate to ensure that everyone can access the minimum entitlement of 25 litres per person per day.

6.1.4 A supply of 25 litres per person per day

While an overwhelming majority agree that it is now easier to get water, about 55% state that the agreed daily allowance of 25 litres is not always available from communal taps.

While not all respondents are able to obtain this amount from communal taps, most (77%) feel that 25 litres per person per day is sufficient for their daily needs. This should however be understood relative to what people have been accustomed to up to now (15.3% previously got water from a spring, 3.5% from a pond or dam and 95.8% got it from a river). It is also unlikely that people are aware of the link between health and sufficient clean water.

Diseases related to inadequate water supply and sanitation may be water-borne (spread through water supply), water-washed (lack of water for personal and food hygiene) or water-based. Transmission of many such diseases depends on access of human wastes to water or people's mouths and this can be broken by safe disposal of excreta, personal and domestic hygiene, improving water quality and preventing recontamination of water supplies. Water washed transmission of diseases such as the most common, diarrhoea, can be dramatically reduced by increasing the quantity,

availability and utilisation of water⁶⁴. In South Africa, diarrhoeal disease is responsible for almost 25% of deaths amongst black and coloured children between 1 and 4 years of age and for nutritional deficiency and low weights⁶⁵.

An indication of the low expectations of these rural villagers, is the fact that the 25 litres per person per day allowance is only half the 50 litres per person per day Basic Water Requirements (BWR) for Fundamental Human Needs figure, established at the 1977 UN Water Conference and the 1993 Earth Summit. Just how small the 25 litres per person per day allowance is, becomes clear when it is compared with the 120 litres needed to fill a bath in the average South African middle class household. In the light of this, current DWAF proposals for compulsory national standards for low density areas to be dropped to only 7 litres per person per day, seem patently absurd and wholly unacceptable⁶⁶.

6.1.5 Unemployment and dependency on grants and pensions

The research showed that there is very little employment available in the Eastern Cape rural villages surveyed. Overall unemployment statistics indicate that this is probably true for most rural settlements in the Province. This results in overwhelming dependence on pensions and social grants as well as, to a lesser extent, on remittances from migrant workers. Lack of employment opportunities and resultant poverty remain the greatest obstacles to the affordability of water from the schemes. This is so even though average monthly water charges are very low. One focus group went as far as to suggest a figure of R2 per household per month as the maximum they could afford to pay for water. This might also reflect an understanding that government should subsidise services such as a basic water supply in order that the limited income available to rural communities can be put to the best possible use.

Poverty also appears to inhibit effective community participation in water committees. Among reasons given for non-participation were that people were too hungry to take part effectively and that they lacked money to buy clothes appropriate for attendance at meetings. Some respondents did however state that as they were unemployed, they had substantial free time. This allowed them to get involved in local structures.

6.1.6 Contribution of the schemes to local economic development

National water policy does not clearly take into account the possible impact of rural water schemes on local economic development. One of few mentions of the potential local development by-products of water schemes is made in DWAF's Institutional and Social Development package.⁶⁷ Given that rural water projects in many cases represent the only significant development input into rural settlements (and that this is likely to be the case for some time to come), this is, in the view of the research team, a serious oversight.

While the majority of respondents agree that the quantity of water available from schemes is adequate for domestic purposes, most also point out that there is not

⁶⁴ Sanders & Groenewald (1986)

⁶⁵ Bond (2000)

⁶⁶ DWAF (2000a)

⁶⁷ DWAF (1999)

enough to permit basic local economic development or subsistence projects such as small construction and gardening. Given that local communities have almost no other resources to allow them to build up at least limited self-sufficiency, a major opportunity seems to have been missed to kick-start local economic development via an allowance of water greater than 25 litres, or even through a free water allowance.

6.1.7 Gender issues

It is clear from this study that women have been key beneficiaries of the new rural water schemes. The overwhelming majority of respondents interviewed agree that fetching water had been made much easier, quicker and safer, and that there is generally enough water available from the schemes for domestic purposes. This is of particular importance as women bear the main burden of fetching water and domestic work in rural communities. Attitudes to women's participation in water committees also proved largely positive.

6.1.8 A "culture of entitlement"?

A criticism is often made in current literature and by various commentators, that poor communities expect the government or local authorities to provide them with basic services on a charity basis. Approaches that seek to cater for the needs of the poor are criticised for stifling initiative and discouraging self-sufficiency. Our research tends however to disprove the prevalence of a "culture of entitlement" in the villages surveyed.

The majority of respondents (73%) agree that, in principle, consumers should pay for the water that they use. Similar responses to allied questions indicate that consumers do not expect water for free, while only just over 30% think that water is too expensive. It is important to note that "in principle" agreement that water consumed should be paid for is not the same thing as actual ability to pay market prices for it.

About one third of respondents responded positively to a separate question on whether water should be provided free. This can perhaps be read as justifying the "entitlement" argument. It is however more likely an indication that, owing to poverty and unemployment, there is a serious affordability problem, which leads people to suggest a free water supply.

In addition, responses indicate that the community is eager to take broader responsibility for the operation and maintenance of the system - almost 85% believe the community should maintain the system.

6.1.9 Metered yard taps and communal pre-payment meters

A significant majority of those interviewed (57.6%) are prepared to pay more for a yard tap, which is also metered to measure individual consumption. A high proportion of respondents suggest that government should be prepared to fund this. This seems to indicate general dissatisfaction with the current system of communal taps where there is no control over individual use and a flat rate is charged monthly for consumption. While the higher initial cost of metered yard taps seems to make these an unrealistic option, the longer term advantages for sustainability accruing

from better payment of service charges by those with yard taps might arguably make the initial higher capital outlay worthwhile.

In contrast there is overwhelming opposition to the use of communal pre-payment water meters. Fewer than 10% are in favour of this system. It is however likely that very few respondents understand how such a system would operate.

6.1.10 Poverty and payment for water

There is majority acceptance (72.9%) of the need to pay for water and an expressed willingness to pay even more for metered yard taps (57.6% of respondents). Ability to actually pay is however clearly a significant problem for the majority of households. While the average household tariff is only R8.18 per month, just under half of respondents (49.3%) say that they are unable to pay for the water that they use. This is a consequence of widespread poverty caused by the high unemployment rate, which increases dependency on pensions and social grants. A key conclusion here is that, while respondents are in principle willing to pay for water consumed, circumstances often make it impossible for them to do so. Respondents in one focus group explained that they are often faced with the choice of paying for water or to send their children to school. In addition, the affordability problem could mean that while, in response to other questions, a majority expresses its willingness to pay more for metered yard taps, these might, without an additional subsidy, in practice be beyond the means of most households.

Respondents expressed themselves in favour of payment for water on a sliding scale or a rising block tariff. While current government policy seems to lean towards cutting off those who do not pay for services, community members in contrast avoid a punitive approach. In most cases they prefer alternative options such as payment through work on community projects and national cross-subsidisation of the very poor. Most villagers support the idea that everyone should have access to water whether or not they can afford it.

6.1.11 Local government capacity

Responses to questions regarding the role of local government in maintaining the system indicate that fewer than 20% believe that it is able to do so. Less than a quarter of respondents believe it should play this role. Further enquiries in focus groups reveal that respondents are in some cases not sure of local authority capacity and in others, if they even exist.

6.1.12 Appropriate technology

With regard to technical options for water provision, it seems clear that a majority of respondents seem to think that alternative technologies are not appropriate. Despite the fact that they might be more expensive and more difficult to sustain in the long term, diesel or electric pumps are preferred above other options. Experience in one village indicates that they would now prefer a protected spring to the diesel engine that they originally chose. While there is clearly a perception that "high-tech" systems provide a better service, or that they represent the most modern and thus most desirable option, more effort should in future go into a thorough exploration of all the options available and their relative advantages and drawbacks.

Rainwater harvesting is currently not seen as a practical option by most respondents. The reason for this seems primarily to be that respondents are unable to afford the initial outlay on tanks and collection systems.

6.1.13 Sustainability of water committees

While community structures seem to be the only feasible service delivery agents in the short term, this research has indicated that these bodies suffer from some serious problems and shortcomings. While most respondents express confidence in their ability to manage water schemes, serious sustainability problems include:

- Difficulty in attracting new members
- Insufficient training leading to inadequate skills levels
- The voluntary nature of the committees resulting in lack of incentive for members to remain involved
- Lack of powers to enable them to take effective action to enforce payment of water charges. The genuine inability of many people to pay makes this an apparently insoluble problem.

All these difficulties have resulted in a gradual decline in enthusiasm and participation amongst members of the committees. In the case of Lalini, inability to resolve the payment problem has led to a total stalemate and breakdown in service delivery.

It is the view of the researchers that, unless solutions are found to these problems, they might ultimately lead to the collapse of other water schemes. This danger is compounded by the prevalent notion that if a scheme ceases to operate, traditional water sources remain an alternative option. While this may in many cases be true, the attendant health risks and the extra burden on women, are unacceptable consequences.

6.1.14 Integrated development

While water schemes are in many cases the only development initiatives to date in these villages, it is important that they are not merely seen as ends in themselves. The point is to build on the initial enthusiasm generated by the schemes. Apathy and cynicism might otherwise result. As pointed out in (h) above, national policy has not taken the broader development potential of water schemes into account.

Rather than viewing them as a one-off contribution to the improvement of rural life, existing water schemes must be built on and linked to other local development projects. The schemes can and should form the basis for integrated rural development clusters involving all relevant government departments, local authorities and other key agencies.

6.2 Recommendations

The following recommendations flow from the conclusions of this research.

6.2.1 A free lifeline supply of water

In line with original policy as codified in the RDP⁶⁸, rural water schemes should be established on a supply-driven basis. This means that household water access should be available as a human right. This is what the RDP calls "the fundamental principle of our water resources policy"⁶⁹. The principle was also recognised in the South African Constitution's Bill of Rights in 1996 which stated that: "everyone has the right to an environment that is not harmful to their health or well-being... everyone has the right to have access to healthcare services, including reproductive health care; sufficient food and water; and social security..."⁷⁰.

An entirely demand-responsive approach is inappropriate to a rural environment where absolute poverty remains a barrier to rural people expressing their water needs in terms of market demand. As is the case in most urban projects, all schemes should therefore incorporate at least a minimum infrastructure standard for all households. Given its importance for basic health and survival, all households should have access to a free lifeline supply of water of 50 litres per person per day in accordance with World Health Organisation recommendations. While this may not appear realistic in crude cost recovery terms, this daily minimum is imperative for health and environmental protection, as a kick-start to local economic development, and to break down the apartheid inheritance of uneven levels of basic services.

Current levels of poverty and unemployment make it extremely difficult for a significant proportion of rural households to afford regular water charges. It is however the opinion of most respondents that failure to pay for water should not result in a cut-off of water supply. The preferred solution is some form of cross-subsidisation via a rising block tariff. This will permit everybody to obtain a minimum lifeline supply of water for free with increased unit charges for higher levels of consumption.

At present however, national government is decreasing subsidies for operating purposes in its budgetary allocations for rural water schemes. The Department of Water Affairs runs two payment schemes, both aimed at rural areas and referred to as Community Water and Sanitation schemes, one covering capital schemes and the other operating costs. Together these schemes make up approximately 19.6 % of local government's total transfer revenue. While the capital scheme payments increase at a projected real rate of 61.4 %, operating grants decrease at 10.5 % from 1999/00 to 2002/03⁷¹.

⁶⁸ The RDP's stated short-term aim was to provide all households with a clean safe water supply of 20 - 30 litres per capita per day within 200 metres. A medium term standard of 50 - 60 litres per capita per day was also proposed.

⁶⁹ ANC (1994)

⁷⁰ RSA (1996)

⁷¹ Whelan (2000)

Given that the overwhelming majority of rural dwellers are relatively poor, cross-subsidisation of the indigent is not possible at a local level. The authors of this report therefore recommend a reversal of current trends in national government's funding policies to permit adequate cross subsidisation of capital and operating costs at a national level.

6.2.2 Rural water schemes should be part of an integrated rural development approach

Existing water schemes must be built on and linked to other local development projects. The schemes can and should form the basis for integrated rural development clusters involving all relevant government departments, local authorities and other key agencies. All new water schemes should be planned as part of a comprehensive local development programme.

The framework for this already exists under legislation such as the Development Facilitation Act and Local Government Transitional Act which provide for integrated development plans at local and district level. In addition, Government's upcoming rural development strategy should also place emphasis on problems of rural water supply and the linkages between water and local economic development.

6.2.3 Link water provision to local economic development

As water schemes are often the only significant development input in rural areas, they should aim to provide a level of supply that can stimulate local economic development. The daily allowance per capita should provide at least sufficient water to help kick-start local economic activity such as small construction projects, subsistence agriculture and cottage industries. Rather than seeing this as an additional burden on the fiscus, Government should view a basic water subsidy as a kick-start to local economic development and a worthwhile investment in long term rural sustainability.

6.2.4 Bring the daily water allowance per person into line with international standards

For health, environmental and other reasons listed above, national water policy should at the very least be brought into line with international minimum standards that recommend a 50 litre per person per day Basic Water Requirement (BWR) for Fundamental Human Needs. Implementation should be in line with the phases originally recommended in the RDP⁷².

6.2.5 Level of service provided by DWAF to move towards metered yard connections

While the level of poverty in rural areas raises affordability problems, existing research indicates that significant health benefits result from an on-site supply of

⁷² The RDP's stated short-term aim was to provide all households with a clean safe water supply of 20 - 30 litres per capita per day within 200 metres. A medium term standard of 50 - 60 litres per capita per day was also proposed.

potable water⁷³. In the light of this and also because of the high level of demand from respondents for on-site taps, DWAF should move towards provision of sufficient funding to allow for the installation of metered yard connections to all rural consumers. As a start, DWAF should fund a number of rural pilot schemes and linked research projects, to test the impact of metered yard connections on service payment levels and also on health.

6.2.6 Provide ongoing support to water committees

It is unlikely, given the current situation in rural areas, that local authorities will be able to adequately support and maintain rural water schemes for the foreseeable future. Consequently, water committees are, in the short term, likely to be the only viable water service providers in these areas. Many of the committees however face imminent collapse, or have in fact ceased to operate. Government should therefore urgently move to set up an ongoing training, support and mentoring programme to ensure their long-term sustainability. Local government structures should be encouraged to act as intermediaries in contracting support service agents to give ongoing support to water committees.

A conflict resolution service should be provided to water committees in cases where they have ceased to function or are in crisis due to a failure to reach consensus, or because of conflict with sections of the community.

The consultation process with communities prior to the installation of new water projects has in many cases proved inadequate. This has often resulted in the imposition of water schemes or technologies that are not felt to be appropriate by community members. As a result, schemes have sometimes failed or proved inadequate. DWAF should in future ensure the effective monitoring and evaluation of consultation processes. Where necessary, DWAF should put in place a process for the "retrofitting" of the social and community components of rural water schemes where these have been a failure.

DWAF should also investigate the possibility of setting up a system to allow payment of a stipend to members of water committees to ensure their sustainability. A policy framework for this would need to be developed.

6.2.7 Provide adequate support and resources to local authorities

Democratic local authorities must eventually take on their appropriate role as rural water service providers. Our research however indicates that they currently lack capacity to undertake this role and are not seen as appropriate service providers by most community members.

Given the obvious lack of local authority capacity at present, three options arise:

⁷³ According to Sanders and Groenewald (1996), distance to the water source is of the utmost importance in curtailing water-washed transmission of disease.

6.2.7.1 In the medium to long-term, build local authority capacity and ensure that these institutions are properly resourced

It will be essential in the longer term to ensure that democratic local government plays its appropriate role in the delivery of water services, either directly or via intermediaries. Its current lack of capacity and limited resource flows to it from national government mean, however, that this is likely to be a long-term project.

Government should ensure that local authority training needs are urgently assessed and that an ongoing training, support and mentoring programme is set up to ensure that they can take on their appropriate service provision role in the medium term. This may also involve assistance to local authorities in managing the outsourcing of certain service provision functions to support agencies. These services should however be under the control of the local authority and should not be privatised.

Due to their inadequate tax base and inadequate inter-governmental transfers, most rural local authorities also lack the resources to play an effective role as water service providers. Current subsidy patterns indicate a decline in support for operating costs. There should be appropriate cross-subsidisation at a national level for both capital and recurrent expenditure on rural water supply. The government should urgently look into the appropriate resourcing of these structures to allow them to perform their functions effectively.

6.2.7.2 In the short-term, contract out local authority functions to public-community partnerships and support agencies

In the studies examined in the literature survey, the so-called BoTT has been criticised, among other things, for causing administrative confusion, lengthening implementation time, and being more expensive and overly bureaucratic. The researchers concluded that this approach draws away resources from the priority development area of rural local government capacity building.

As a short-term alternative, public-community partnerships, set up with NGO support, are more cost-effective and preferable to a for-profit approach. Government should, in the short-term, contract out local authority functions to such partnerships with the help of support service agencies such as NGOs. These have adequate resources and the experience to ensure effective community participation and capacity building.

6.2.7.3 In the short to medium-term, ensure that community structures develop sufficient capacity to undertake the task.

The obvious immediate approach should be to ensure that community structures have adequate resources and capacity to be water service providers. Community responses indicate that an overwhelming majority are confident that water committees were trained and are able to operate and maintain the system. There are however villages where community structures have collapsed or are in crisis and the scheme is operating only partially, or not at all. A process needs to be put in place to ensure that any shortcomings in the processes that established existing water schemes are remedied and that all water committees are capable of doing their job. This should be

seen as part of a "retro-fitting" process to ensure that committees from existing schemes that are not operational are given the necessary training and capacity building to ensure the sustainability of these schemes.

6.2.8 Conduct a campaign to inform communities of their rights

This research demonstrates clearly that few rural people are aware of their rights to water enshrined in the Constitution and in current legislation. DWAF should fund and support an effective publicity campaign to ensure that rural communities understand their legal and constitutional rights to water and the implications of the Water Services Act.

6.2.9 Encourage use of rainwater harvesting and alternative technologies

A number of respondents stated that while rainwater is harvested on a small scale, most community members are not able to afford the necessary tanks and equipment. Most communities also currently opt for relatively expensive diesel or electric pumps, which may be difficult to sustain in the long term.

DWAF should consider setting up a training and subsidy programme to ensure that alternative water sources such as rainwater harvesting, as well as alternative technologies, are fully exploited in rural communities. In addition, DWAF could consider supporting a micro-finance scheme to permit the use of alternative technologies at a household level.

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8 APPENDICES

8.1 Checklist of issues for development of questions:

The following list of issues was collectively developed by the research team as a basis for the drawing up of the community questionnaire.

- A. Government subsidy for infrastructure
- B. Payment for water delivery
- C. "Access" v the need to pay
- D. Who is responsible for/owns the system
- E. Responsibility for operation and management of the system
- F. Payment for operation and management of the system
- G. The level of service (basic minimum standards)
- H. The availability (sufficiency) of water; access to water supply
- I. The quality of water
- J. Community employment creation
- K. Consultation with the community
- L. Participation of the community
- M. Capacity building and training of community members
- N. Gender relations in the system of governance
- O. Impact of service delivery on gender relations
- P. The use of appropriate technology

8.2 Questionnaire used in community interviews

8.2.1 Personal details

8.2.1.1 Male/female

8.2.1.2 Number of people currently living in the household

8.2.1.3 List the members of your household

- How many are pre-school/at school?
- How many are working?
- How many are unemployed?
- How many are pensioners?

8.2.1.4 List the number of family members:

- who do not live here at present
- who regularly send you money

8.2.2 Water supply

8.2.2.1 Where did you get your water before the water scheme and where do you get it now?

- | | |
|--------------------|--------------|
| • Spring | (before/now) |
| • Pond / dam | (before/now) |
| • Stream / river | (before/now) |
| • Rain Water tanks | (before/now) |
| • Communal tap | (before/now) |
| • Windmill | (before/now) |
| • Reservoir | (before/now) |
| • Yard tap | (before/now) |
| • Other | (before/now) |

8.2.2.2 Do you spend less time now getting water than before the water scheme? (Y/N)

8.2.2.3 How much of your water need is met by the water scheme?

- None
- Quarter
- Half
- Three quarters
- All

8.2.2.4 Government policy says that you should get 25 litres of water per person per day. Are you always able to get this amount from the tap? (Y/N)

8.2.2.5 Is 25 litres of water per person per day sufficient for your household needs? (Y/N)

8.2.2.6 I can't always get 25 litres of water per person per day because:

- It costs too much
- I have to go to far to fetch it
- There is not always enough water
- It takes too long to collect it
- The water system often doesn't work
- There is a dispute over access
- Nobody is available to collect water
- Access to the water is restricted

8.2.2.7 I have enough water available for:

- Washing of family members (Y/N)
- Laundry (Y/N)
- Cooking (Y/N)
- Drinking (Y/N)
- Cleaning the house (Y/N)
- Brewing beer (Y/N)
- Gardening (Y/N)
- Irrigation (Y/N)
- Building houses (Y/N)
- Brick-making (Y/N)

8.2.3 Payment for water

8.2.3.1 What do you pay per month for the water that you use?

8.2.3.2 Can you afford the money you pay for water each month?

(Y/N)

8.2.3.3 Would you be prepared to pay more than you currently pay:

- To ensure there is a constant supply of water from a communal tap?
(Y/N)
- For a tap in your yard?
(Y/N)
- To get enough water for all your non-domestic uses?
(Y/N)

8.2.3.4 Are you happy to pay extra money to get more water for other uses?

(Y/N)

8.2.3.5 What contribution did you make to help build the current water scheme?

- Cash (Y/N)
- Paid labour (Y/N)
- Unpaid labour (Y/N)
- Materials (Y/N)

8.2.4 Agree and Disagree statements (agree/disagree/not sure)

- 8.2.4.1** It is right that government paid for the initial infrastructure for the water scheme
- 8.2.4.2** The community should pay for the building of infrastructure for water schemes
- 8.2.4.3** The community is responsible for doing the work to maintain the water scheme
- 8.2.4.4** Government should pay for the operation and management of the water scheme
- 8.2.4.5** The District Council is responsible for maintaining the water scheme
- 8.2.4.6** The District Council is able to maintain the water scheme
- 8.2.4.7** The government/implementing agent decided on what services to provide without consulting the community
- 8.2.4.8** The community was consulted on what water services should be provided
- 8.2.4.9** The water scheme was put in as a result of the community identifying it as a priority
- 8.2.4.10** We did not ask for the scheme and should not therefore not pay for it
- 8.2.4.11** Water from the scheme is too expensive
- 8.2.4.12** We did ask for the scheme but should not pay for it
- 8.2.4.13** Water should be provided free to everyone
- 8.2.4.14** I should pay for the water that I use
- 8.2.4.15** Since the start of the water scheme it is generally much easier to get water
- 8.2.4.16** Members of the community were trained to operate and maintain the current water scheme
- 8.2.4.17** Members of the community are able to operate and maintain the current water scheme
- 8.2.4.18** Members of the community were assisted to set up water committees
- 8.2.4.19** Water committees were trained
- 8.2.4.20** There is often not enough money to pay for diesel to run the pump

- 8.2.4.21** The pump often breaks down
- 8.2.4.22** There is nobody to fix the pump when it breaks down
- 8.2.4.23** I have to get water from an alternative source because the water scheme is too expensive
- 8.2.4.24** I have to get water from an alternative source because it is not always available from the water scheme
- 8.2.4.25** Water from the scheme is of poor quality
- 8.2.4.26** Government policy says at least 30% of members of the water committee should be women
- 8.2.4.27** Women should be involved in the activities of the water committee
- 8.2.4.28** Women should be involved in the operation and management of the water committee
- 8.2.4.29** Women should spend less time getting water as a result of the water scheme
- 8.2.4.30** A windmill would have been better than a diesel pump
- 8.2.4.31** A protected spring would have been better than a diesel pump
- 8.2.4.32** A hand pump would have been better than a diesel pump
- 8.2.5** Your priorities
- 8.2.5.1**
- 8.2.5.2** What would you recommend to improve water supply in your community?
- Use protected springs not ground water
 - Use windmills
 - Install yard taps
 - Use rainwater tanks
 - Install water meters
 - Other
- 8.2.5.3** If the answer to 5.2 was "other" give details
- 8.2.5.4** How can we improve management of the water supply?
- Get everyone to pay
 - Get the government to pay for diesel
 - Get the government to pay for operators
 - Measure individual use and pay for it
 - Use pre-payment water meters

8.2.5.5 List ways in which the government / implementing agent has assisted in the implementation, operation and maintenance of the current water scheme

- They provided funding
- They facilitated project planning meetings
- They undertook project management
- They facilitated training
- They paid for labour
- Other

8.2.5.6 If the answer to 5.5 was "other", give details

8.2.5.7 Which of the following problems occurred where government / implementing agents were involved with the implementation of the water scheme

- Failure to consult
- Poor planning meetings
- Inadequate technical training
- Inadequate organisational training
- No community control of project funds
- Not enough women involved in the process
- No permanent jobs created
- Not paid enough for labour

8.2.6 General questions

8.2.6.1 Are you aware of the Water Services Act? (Y/N)

8.2.6.2 If yes, what do you understand by it?

8.2.6.3 What are your main concerns in respect of the water scheme in your community?

8.3 Village case studies

8.3.1 Qoqodala (Mannelspoort, Xusha, Lalini, Nzolo)

Local conditions:

Qoqodala is a multi-village project consisting of 12 villages. This study covers four of the villages, Mannelspoort, Xusha, Lalini and Nzolo. These villages were selected for study on a random basis. The Qoqodala villages lie in a wide, dry, valley surrounded by mountains some 30 kilometres from Queenstown. The valley has no electricity network but solar-powered telephones have recently been installed there.

History of the project:

The water supply project for these villages was begun in 1994 and completed in 1996. The project however dates back to 1989 when the local Development Forum approached the then Transkei Military Council for assistance. Various NGOs were subsequently contacted, including RSS, which referred the Forum to the Mvula Trust for funding. RSS also later facilitated technical training and implementation as well as institutional and social development for local structures.

Local organisation:

Each of the 12 Qoqodala villages has its own water committee. There is no tribal system in the villages and the local transitional rural council (TRC) is the accepted authority. Since the inception of the water scheme, each village has had its own reservoir and pump. Operations and maintenance are carried out by village technical teams, which were trained to maintain the water systems. Each household originally contributed R20 to kickstart the O&M process and households now contribute between R2 and R5 per month depending on circumstances in the village. The residents of each village determine the size of the contribution.

A brief description follows of the water supply situation in each of the four selected Qoqodala villages.

8.3.1.1 Mannelspoort

Local conditions:

This village consists of 146 households and lies at the end of a gravel road about 3 kilometres from Qoqodala. Poverty is a significant problem in the village with only 15% of households surveyed having a formally employed member. 45% of households surveyed were wholly or partly dependent on a pension for their survival, while 30% of households were wholly or partly dependent on remittances from an absent family member.

The project:

The project became operational in 1995. A new committee has since replaced the water committee, which was originally elected and trained to manage, maintain and

operate the water scheme. The project uses a diesel pump to pump water from a borehole. This supplies 18 tap stands serving the 146 households and a population of 2430. Water from the taps is supplemented with water from a protected spring located at a higher level. A piped connection to the spring was built by the community using its own resources and training gained through the project. This connection allows the community to save on diesel expenditure as it operates on the basis of a gravity feed. The project and the gravity feed from the spring have resulted in significant savings in time for the community as they no longer need to walk long distances to fetch water. Water from the reservoir is also used to irrigate a communal vegetable garden. 85% of respondents say that they now get most of their water from tap stands as opposed to the river, which was previously the source of 85% of water. 70% state that they get all their water from the scheme. All respondents interviewed felt that women's water work load was reduced as a consequence of the scheme. Households pay a monthly tariff of R5 to the water committee and 60% are prepared to pay more for a yard tap on their own property.

Apart from occasional payment problems, no significant difficulties have been experienced since the inception of this scheme. This seems partly to be due to a thorough training and empowerment process undertaken with the community. This started early on in the project and addressed financial and administrative, technical, maintenance, construction and health aspects.

Synopsis:

This is a small, closely-knit community and it is thus easy for most residents to take part in decision-making around the water scheme. In addition, the community was thoroughly trained and involvement in project work was ensured. As a consequence of the training process and thorough community involvement in the project, payment levels for water are good despite prevailing levels of poverty in the village. The project provides a good standard of service.

8.3.1.2 Xusha

Local conditions:

The village is situated at the eastern end of Qoqodala. It has a population of 2500, living in 114 households. Only 25% of households include a formally employed person while 65% are wholly or partly dependent on a pensioner. Half of all households are wholly or partly dependent on remittances from an absent member.

The project:

The project became operational in 1996. The scheme uses a diesel pump to pump water from a borehole to a 50 000 litre reservoir. This in turn supplies 16 communal taps. Villagers currently use less than minimum standard designed for (25 litres per person per day). Exact consumption figures are not available but 95% of respondents say they now get their water from a communal tap and 90% say that 25 litres is always available. Respondents state that the average family (5.8 persons) uses three 25 litre containers of water daily. Respondents express a desire for a higher level of service - 65% state their preparedness to pay more for a yard tap on their own property.

The project is managed by a water committee which mainly consists of women (the chairperson, secretary and treasurer are all women). Technical assistance is obtained from a company in Queenstown, which supplies a mechanic if required. Households pay a monthly tariff of R8.50 of which half goes towards payments to the operator. While there are number of people behind with their monthly payments, according to respondents, the project operates well overall. Committee members did however complain of poor attendance at meetings called to address problems with the scheme.

Synopsis:

The scheme operates satisfactorily although a number of households are behind with their payments. 65% however say they would be prepared to pay more for a tap in their own yard. The project seems to have a committee which is dedicated to running the system.

8.3.1.3 Lalini

Local conditions:

The village lies alongside a mountain at the very edge of Qoqodala. It consists of 120 households and 2110 people. This village is one of the poorest in Qoqodala with a higher than average proportion of household members of school-going age or younger (over 65% versus an average for all villages surveyed of about 52%) in households surveyed. None of the 20 households surveyed has a member in formal employment, while 55% are wholly or partly dependent on a pensioner. 70% of households surveyed are wholly or partly dependent on an absent contributor.

The project:

The project began operating in 1996 after initial problems with payments for labour and inconsistent work output. The system serves 13 tap-stands laid out in accordance with RDP standards.

The project is currently not operational. According to participants in a focus group, 40% of the community have not contributed the monthly charge of R5 for several months. Those paying have decided that no water will be pumped by the scheme until everyone pays. In the event of special needs such as a funeral or other function, the affected family usually buys its own diesel to permit water to be pumped. The water committee has tried a number of approaches to achieve a satisfactory payment level, including calling in the Qoqodala Coordinating Committee. All its efforts have however thus far been in vain.

There is significant resistance by a substantial minority to paying the monthly tariff. Some maintain that some of those able to pay are unwilling to do so. Others say that they are unable to afford the monthly tariff due to other responsibilities such as payments for food and school fees. Unemployment and dependence on pensions do seem to be genuine problems for many in Lalini.

Most people have reverted to using a nearby mountain spring as well as the river. Although they originally agreed on a diesel-powered system, the focus group now

concedes that it may have been better to opt for a gravity-fed system drawing water from the spring. This would be a cheaper and more sustainable option. Whether or not the implementing agent was told about this option is a matter of dispute. The agents' records indicate that the community did not raise this option.

Synopsis:

There is a delivery stalemate in this village as a result of a conflict between those prepared to pay for water and a substantial minority of defaulters. Extreme poverty seems to be at the root of the problem. A better consultation process may however have resulted in the choice of a more appropriate technical option and avoided the current divisions in the community which lead to dependency on potentially unhealthy water sources.

8.3.1.4 Nzolo

Local conditions:

This village has population of 2360 in 110 households, according to a census conducted by the water committee for purposes of tariff collection. Unemployment is high (only 20% of households have someone in formal employment) and half of households surveyed are partially or wholly dependent on a pensioner. The village also has a higher than average proportion of children at school or younger (over 56% versus 52% on average).

The project:

The project started operating in 1996 and has run smoothly ever since. The scheme uses a diesel pump to pump water from a borehole to a 50 000 litre reservoir. This in turn supplies 19 communal taps. The monthly tariff is R5 per household.

There are substantial problems with local organisation. There is substantial non-payment of water charges but little community interest in attending meetings to deal with the issue as long as water continues to flow. The original water committee continues to run the scheme but is without a chairperson as he was forced to resign due to a combination of community pressure and old age.

Synopsis:

This scheme is a success in terms of delivery, operation and maintenance. Serious weaknesses in the committee might however lead to longer term problems and community participation is poor. There is clearly a need to strengthen community involvement in water delivery and build the capacity of the water committee.

8.3.2 Ngqanda

Local conditions:

This village is one of about 60 villages in the Glen Grey area about one kilometre from Lady Frere in the eastern part of the Province. Unlike many of the villages,

which are quite remote, Ngqanda has easy access to the town and trading networks. Glen Grey Hospital is also within walking distance of the village.

Ngqanda has a population of about 2500 in 160 households. Over 47% of the households surveyed have a member in formal employment. This is substantially better than the average of only 26% for all villages surveyed. Almost 65% of households also include one or more pensioner.

The project:

The scheme uses a diesel pump but this was not operational at the time of our survey and no piped water was available. Most of the 13 tap stands were also broken and many pipes were also leaking and exposed.

While there is a water committee in place, they have received no training. They do however appear to have an understanding of broader development issues and the importance of democratic practice in such matters. The village is divided between villagers who support the water committee and those supporting the local headman. There is clearly antagonism between these two groups over who has power and controls development in the area. This could well be the reason for collapse of the water project. Another problem was that local people were not consulted before the project was implemented. Work on the project was done by government employees with minimal local involvement. To this day it is expected that diesel will be brought from the department of agriculture in former Transkei and that departmental officials will also do maintenance. Little work is however done by these officials and this leads to an extremely erratic supply of water from the scheme.

Synopsis:

This former homeland project was not negotiated beforehand with the community. There was consequently no community involvement or development of a consciousness regarding payment for operation and maintenance. This has resulted in a lack of sense of community ownership and a scheme that is largely dysfunctional.

8.3.3 AmaQolomba

Local conditions:

This small village lies about 10 kilometres from Whittlesea in former Ciskei. The village has a population of 120 people in 11 households. The village has the highest proportion of households with a formally employed person (57%) of all the villages surveyed.

The project:

This project was completed in 1998 and became operational in 1999. The scheme is powered by an electric pump, which pumps water from a borehole. This supplies a small 50 kilolitre dam which feeds a reticulation line of 3 taps.

This is a well-organised project with a committed water committee consisting of 5 women and 2 men. The community pays a monthly tariff of R20 per household,

which includes a contribution to a replacement fund for the pump. The community has been trained in the institutional and social as well as the technical sides of the project. According to the focus group, because of the vigilance of the community, there have been no acts of vandalism to date. The success of the scheme is also put down to the low running costs of the electric pump. The pump is fully automatic and the operator only needs to undertake a routine occasional check-up and cleaning of the pump-house. 85% of respondents stated that they are prepared to pay more for a yard tap.

Synopsis:

This is a small and tightly-knit community allowing maximum involvement in decision-making. The community was well trained and was involved in all stages of project implementation. Although the monthly tariff is substantially higher than average, community members are willing to pay. The relatively larger proportion of households with people in formal employment may also be a contributing factor to the success of this scheme.

8.3.4 Upper Hukuwa

Local conditions:

The village is situated 15 kilometres from the town of Whittlesea in former Ciskei. It has a population of 758 in 152 households. The village is relatively poor with only 35% of households having someone in formal employment and 55% of households wholly or partly dependent on a pensioner.

The project:

The scheme started operating in 1998. It uses an electric pump to pump water from a borehole to two 50 kilolitre reservoirs. These then feed 35 tap stands.

Institutional and social training has taken place and the committee appears to be effective in running the scheme. An operator is employed full-time although limited work is required on the automatic pump. He cleans the motor and does occasional repairs to leaks in pipes and taps. The community contributes R10 per household every month for operation and maintenance. This is deposited into a community account.

75% of respondents said that they would pay more for a yard tap.

Synopsis:

This is another successful project with community cohesion and committee effectiveness key factors.

8.3.5 Sabalele

Local conditions:

Sabalele consists of two villages: Upper and Lower Sabalele. The former was originally the project recipient, with a second phase extending to Lower Sabalele. Only 35% of households surveyed have a formally employed member while a high proportion of households (65%) are partly or wholly dependent on a pensioner.

The project:

This was a Presidential Lead Project implemented by DWAF to supply water to a village where one of the heroes of the liberation struggle was born. The project was opened amid celebrations by the minister of water affairs but collapsed two years later due to lack of diesel and maintenance.

While the committee says that it was trained in operation and amangement aspects, there appears to have been community opposition to the idea of the community paying for water. Many community members felt that, as the project was a gift from the government, they should not have to pay for water. While a minority has since been persuaded to pay, most community members claim that they cannot afford to do so. As a result, the project has only operated intermittently since its inception and has been plagued by both technical and social problems. At the time it was visited, the scheme was operating despite financial problems. The main reservoir is subsequently said to have suffered a partial collapse due to heavy rains.

Synopsis:

The project only operates intermittently with a majority stating that they are unable to afford regular payments for water. This is typical of the disastrous consequences of implementing a project without consulting the relevant community.

8.4 Focus groups

8.4.1 Structure of focus groups

Below is a summary of how the focus groups were structured by village:

8.4.1.1 Qoqodala

Facilitators: Thanduxolo Ralo and Russell Grinker

Date: 22 February 2000

Duration: 3 hours and 30 minutes

No. of Participants: 10 members: 8 women and 2 men

8.4.1.2 Ngqanda

Facilitator: Thanduxolo Ralo

Date: 23 February 2000

Duration: 3 hours

No. of Participants: 9 members: 5 women and 4 men

8.4.1.3 Amaqolomba

Facilitator: Thanduxolo Ralo

Date: 25 February 2000

Duration: 2 hours

No. of Participants: 9 members: 7 women and 2men

8.4.1.4 Sabalele

Facilitator: Thanduxolo Ralo

Date: 16 March 2000

Duration: 2 hours

No. of Participants: 8 members: 5 women and 3 men

8.4.1.5 Upper Hukuwa

Facilitator: Thanduxolo Ralo

Date: 17 March 2000

Duration: 1 hour

No. of Participants: 10 members: 6 women and 4 men

Table: Summary of participants by village

Village	Total Participants	Men	Women
Qoqodala (Lalini, Mannespoort, Nzolo and Xusha)	10	2	8
Ngqanda	9	4	5
Amaqolomba	9	2	7
Sabalele	8	3	5
Upper Hukuwa	10	4	6
TOTAL	46	15	31

8.4.2 Issues from individual villages posed as questions

8.4.2.1 Ngqanda:

- ☐ What was the nature of the local dispute leading to reluctance to participate in survey?
- ☐ What are the implications of this dispute for operation of the water scheme?
- ☐ Why is the hospital a major water source?
- ☐ Is affordability a real problem here (65% claimed they could not afford to pay)? If so, why?
- ☐ Why do most people feel they were not consulted over the scheme?
- ☐ Why does the majority believe it should get water free?
- ☐ Why are respondents unclear of the percentage of women required in a water committee?

8.4.2.2 Sabalele:

- ☐ Why do 65% of respondents feel that they were not consulted prior to implementation?
- ☐ Why does the majority believe it should get water free?
- ☐ Why are respondents unclear of the percentage of women required in a water committee?

8.4.2.3 Lalini:

- ☐ Why do 15 households feel that the water is of poor quality?
- ☐ Why do 16 of 20 respondents interviewed now prefer a protected spring to a diesel pump?

8.4.2.4 Xusha:

- ☐ Why are people still getting water from the river even though the scheme works (19 of 20 households do so)?

8.4.3 General issues arising, posed as questions

8.4.3.1 What are the implications of the high levels of adult unemployment:

- ☐ For affordability?
- ☐ For local participation?
- ☐ For dependency on pensions?
- ☐ Other?

8.4.3.2 Migrancy:

- ☐ Are the majority of adults women (as a result)?
- ☐ Is there significant dependency on remittances from migrant workers?
- ☐ Are absent contributors migrants or permanently absent?

- 8.4.3.3** Why is rainwater harvesting not seen as an option?
- 8.4.3.4** Are people still getting water from the river even where the scheme works? If so, why?
- 8.4.3.5** Would it make a significant difference if there were enough water to allow for small local economic (subsistence) activity?
- 8.4.3.6** Confirm the indication in data collected that a yard (private) tap is the key preferred option and that people would pay more for it. If this is the case, why is this so?
- 8.4.3.7** What was the nature of contributions made towards schemes (as claimed) if in fact no cash contributions were received for infrastructure? Why is there confusion over this and what are the consequences?
- 8.4.3.8** When people say government should pay for infrastructure, why do they think this and what do they mean?
- 8.4.3.9** Why do the majority however feel that the community should maintain the system? Does this mean they want to pay for materials for and labour costs of maintenance as well?
- 8.4.3.10** Why do 55% feel the government should pay for O&M? How do people view the relationship between their monthly contributions for water (service charge) and O&M costs?
- 8.4.3.11** How would people use an extra free 25l/person per day if they could get it?
- 8.4.3.12** Would people prefer a sliding scale of charges (i.e. the more you use, the higher the rate you pay) if individual use could be measured?
- 8.4.3.13** How do people view the capacity of local/district authorities in supply of water?
- 8.4.3.14** What solutions do people propose if some people are too poor to pay the current levels of charges (1/3 feel that water is too expensive and should be free)?
- 8.4.3.15 What is the main barrier to project sustainability:**
- ☐ Financial?
 - ☐ Structural/technical?
 - ☐ Political?
 - ☐ Other?
- 8.4.3.16 Technology:**
- ☐ Why do most people prefer a diesel pump?
 - ☐ Are they aware of other options and the relative cost and sustainability implications?

- ❑ How were original options explained and choices made as to what system to use?

8.4.3.17 In what ways have women's lives changed since the schemes were implemented?

8.4.3.18 Given the experience so far with the technology chosen, do people feel that they made the correct choice? If not, why not? (e.g. Lalini: 16 of 20 now prefer a protected spring)

8.4.3.19 Why do 87.5% want yard taps?

8.4.3.20 Why does the majority want metered taps?

8.4.3.21 What could be done to improve delivery of water in existing schemes?

8.4.3.22 Why do people say government should pay for operators and/or diesel? How does this relate to their willingness to pay regular contributions for water (service charges)?

8.4.3.23 Did people also see the scheme as a job creation initiative?

8.4.3.24 Why were people concerned that they should have had more control over project funding and budgeting?

8.4.3.25 Why were 35% concerned that they didn't get enough technical training?

8.4.4 Agenda broadly followed in all focus groups

1. Introduction
2. Facilitators explain the aim of the research project⁷⁴
3. Community members brainstorm on key water supply issues
4. Facilitators present household research findings so far
5. Discussion: questions and answers
6. Summary of proceedings
7. Closure

⁷⁴ the aims of the research were as follows:

- ❑ to determine the practical impact of the implementation of government water policies in rural areas.
- ❑ to determine the water services rural people feel they really need, including the level of service.
- ❑ to determine the level of service rural people feel they can afford and wish to pay for
- ❑ to determine how government water policies are put into practice in rural areas.
- ❑ to determine the extent to which people use the infrastructure, as well as actual usage.
- ❑ to determine the level of community operation and maintenance. This is crucial for the sustainability of the water supply.
- ❑ to recommend solutions for all of the above where applicable.

8.4.5 Village-specific questions:

8.4.5.1 Lalini

Q: Water was felt to be of poor quality. Why?

A: Respondents were probably referring to river water since the scheme was not operational.

Q: A protected spring was now preferred. Why?

A: Three answers were given:

- There is no money for diesel now.
- Some community members just do not want to pay service charges for water.
- Some people in the community had not originally been aware of existing spring.

8.4.5.2 Xusha

Q: Why are there people who are still getting water from the river?

A: There are no problems with the scheme, but they use the river to supplement it, for example for gardening.

8.4.6 Responses from focus groups to general questions

8.4.6.1 What are the implications of the high levels of adult unemployment for affordability, local participation, dependency on pensions, other?	
Qoqodala (Lalini, Mannespoort, Nzolo, Xusha)	There is no money for water because of other costs e.g. school fees. People are sometimes too hungry to attend meetings, participate and contribute intellectually. Morale is low, people have no clothes to wear to attend meetings and they cannot afford taxi fares. They have to use the available money to buy school uniforms and other clothes because children will only go to school if they are properly dressed. Participants are totally dependent on pension money.
Ngqanda	Most of the residents depend on pensions and to a lesser extent on remittances from migrant workers. Unemployment seemingly has negative implications for the sustainability of the project because participants said that they could not afford to pay. They do however have more time to participate in community meetings and functions.
Hewu district (Ama-Qolomba & Upper Hukuwa)	Unemployment is high in both villages. This has negative implications for affordability and payment of water tariffs. Participants however felt that this does not prevent them from participating meaningfully in community affairs and activities. They depend largely on pensions for their livelihood and this makes it possible for them to pay for water.
Sabalele	Given the high unemployment, people cannot afford to pay the monthly tariff. As a result they depend largely on pensions. People participate in community activities and meetings but it is usually the committed few who go to meetings.

8.4.6.2 Migrancy: Is the majority of adults women as a result; is there significant dependency on remittances from migrant workers; are absent contributors migrants or permanently absent?	
Qoqodala (Lalini, Mannespoort, Nzolo, Xusha)	The majority of adults are female because most of the male population are working as migrants or looking for work in towns. There is significant dependency on the remittances from migrant workers. The majority of people sending money are migrants. Those who are permanently absent feel less pressure to send any money.
Ngqanda	Elderly men still live in the village to look after the livestock and fields but younger men have left to seek jobs in the towns. People are to some extent dependent on remittances. Migrants sometimes also have a family elsewhere so don't feel an obligation to send any money.
Hewu district (Ama-Qolomba & Upper Hukuwa)	Migrancy is not high, although young males go to the urban areas to look for work.
Sabalele	Most of those in employment work as migrants. As a result, the majority of community members are women.

8.4.6.3 Why is rainwater harvesting not seen as an option?	
Qoqodala (Lalini, Mannelspoort, Nzolo, Xusha)	Rainwater harvesting is done – they use metal and plastic drums, as they cannot afford proper water tanks.
Ngqanda	Some households have tanks and practice rainwater harvesting
Hewu district (Ama- Qolomba & Upper Hukuwa)	A small number of people have rain water tanks, but this is not considered an option because people say they are expensive in the first place, and they do not want to depend on rainwater.

8.4.6.4 Are people still getting water from the river even where the scheme works? If so, why?	
Qoqodala (Lalini, Mannelspoort, Nzolo, Xusha)	Where taps are too far (in Mannelspoort), there are still people who are getting water from the river. In Xusha there is a neighbouring sub-village which initially did not want to be part of the scheme, but who want to be accommodated now.
Ngqanda	The scheme is not working, so people are still getting water from the river.
Hewu district (Ama- Qolomba & Upper Hukuwa)	Nobody is getting water from the river in this village

8.4.6.5 Would it make a significant difference if there were enough water to allow for small local economic (subsistence) activity?	
Qoqodala (Lalini, Mannelspoort, Nzolo, Xusha)	Yes, this would make a big difference as they would have a community garden and sell vegetables. They could also make bricks.
Ngqanda	The scheme does not work at all, so they haven't thought about other uses so far
Hewu district (Ama- Qolomba & Upper Hukuwa)	If there were enough water, people would engage in projects like community gardens and brick making.

8.4.6.6 Confirm the indication in data collected that a yard (private) tap is the key preferred option and that people would pay more for it. If this is the case, why is this so?	
Qoqodala (Lalini, Mannelspoort, Nzolo, Xusha)	All the participants preferred private taps. However, they also added that if the first 25l were to be provided free, then water would be affordable.
Ngqanda	Yard taps are the preferred option but people do not necessarily want to pay for them
Hewu district (Ama- Qolomba & Upper Hukuwa)	All the participants felt that yard taps are preferable. They would be protected from vandalism and people would have a sense of ownership.
Sabalele	The group felt that yard taps would address the problem of broken taps, because then the taps would be in their yards. Members of the focus group also felt that people would be more willing to pay if they had a tap in their yard. They would be prepared to pay according to how much water they use, and this in turn would encourage people to save water.

8.4.6.7 What was the nature of contributions made towards schemes (as claimed) if in fact no cash contributions were received for infrastructure? Why is there confusion over this and what are the consequences?	
Qoqodala (Lalini, Mannelspoort, Nzolo, Xusha)	Participants did not contribute money for infrastructure but worked on the project as paid labourers.
Ngqanda	They contributed labour to the project. They also claim that they contributed financially towards the reticulation, although this was not finished.
Hewu district (Ama- Qolomba & Upper Hukuwa)	The community worked on the project and earned a minimal wage.

8.4.6.8 When people say government should pay for infrastructure, why do they think this and what do they mean?

Qoqodala (Lalini, Mannelspoort, Nzolo, Xusha)	The participants felt that government should pay for infrastructure, as the community cannot afford it themselves.
Ngqanda	They said government should pay for infrastructure because the community could not afford it. By this they meant both the capital costs of the scheme and operation and management costs
Hewu district (Ama- Qolomba & Upper Hukuwa)	People felt that they do not have the capacity and money to build water projects. They therefore think that this should be the responsibility of government.

8.4.6.9 Why do the majority however feel that the community should maintain the system? Does this mean they want to pay for materials and labour costs of maintenance as well?

Qoqodala (Lalini, Mannelspoort, Nzolo, Xusha)	The community should pay for costs of replacement material and labour for operations and management as this gives them a sense of responsibility.
Ngqanda	The majority felt that government should pay for operations and management as they have done in the past
Hewu district (Ama- Qolomba & Upper Hukuwa)	The majority felt that they should maintain the project. By this they meant paying for materials and labour costs.
Sabalele	There was concern over the payment of operators. It was felt that government should assist with this as at present two members of the committee volunteer their time to operate the plan and do repairs when necessary.

8.4.6.10 Why do 55% feel the government should pay for operation and management? How do people view the relationship between their monthly contributions for water (service charge) and operation and management costs?

Qoqodala (Lalini, Mannelspoort, Nzolo, Xusha)	The community should pay for costs of replacement material and labour for operations and management as this gives them a sense of responsibility.
Ngqanda	Would want government to continue with operation and management role but are open to discussing this with government and the community
Hewu district (Ama- Qolomba & Upper Hukuwa)	The majority felt that they should maintain the project. By this they meant paying for materials and labour costs.
Sabalele	There was concern over the payment of operators. It was felt that government should assist with this as at present two members of the committee volunteer their time to operate the plan and do repairs when necessary.

8.4.6.11 How would people use an extra free 25l/person per day if they could get it?

Qoqodala (Lalini, Mannelspoort, Nzolo, Xusha)	They would use the water for irrigation.
Ngqanda	For other household needs like brewing beer and irrigating small plots of land for food.
Hewu district (Ama- Qolomba & Upper Hukuwa)	To irrigate their gardens.

8.4.6.12 Would people prefer a sliding scale of charges (i.e. the more you use, the higher the rate you pay) if individual use could be measured?

Qoqodala (Lalini, Mannelspoort, Nzolo, Xusha)	The participants would welcome a sliding scale because it means that people would pay according to how much water they used.
Ngqanda	Yes, if consumption can be measured and the community agrees to pay
Hewu district (Ama- Qolomba & Upper Hukuwa)	They prefer a sliding scale because people would be mindful of how much water they are using.

8.4.6.13 How do people view the capacity of local/district authorities in supply of water?	
Qoqodala (Lalini, Mannespoort, Nzolo, Xusha)	They could not assess the capacity of local/district authorities in providing or supplying water because they do not know if these structures exist.
Ngqanda	They felt very strongly that the people employed by the Department of Agriculture are not capable of supplying them with water. They claimed that these people are being paid for doing nothing.
Hewu district (Ama-Qolomba & Upper Hukuwa)	The people of these two villages wanted to take charge of their schemes, and were unsure of the capacity of distant local councils.

8.4.6.14 What solutions do people propose if some people are too poor to pay the current levels of charges (1/3 feel that water is too expensive and should be free)?	
Qoqodala (Lalini, Mannespoort, Nzolo, Xusha)	Solutions include: ☐ tolerate them but encourage them to pay when they have some money (this would cause problems as people would question why they should pay while others are not paying) ☐ encourage them to pay in kind, e.g. working voluntarily on the system.
Ngqanda	Would lower charges so that water becomes affordable (to R2/month), or ask government to install an electric engine.
Hewu district (Ama-Qolomba & Upper Hukuwa)	They allow them to use the water without paying, and when there is a labour intensive project, they are the first people to be considered.

8.4.6.15 What is the main barrier to project sustainability: Financial, structural/technical, political, other?	
Qoqodala (Lalini, Mannespoort, Nzolo, Xusha)	Mainly financial. Other factors were water committees that have become too alienated from the community and intolerance of community problems over payment. These put the committee in an impossible position.
Ngqanda	This is mainly political (mainly between ANC and UDM), but there are also serious technical problems which need to be attended to, in both the short and long term. Finance is also a problem, mainly due to unwillingness to pay, not affordability.
Hewu district (Ama-Qolomba & Upper Hukuwa)	The main barrier to project sustainability in the near future could be financial. At the moment they are coping very well.

8.4.6.16 Technology: Why do most people prefer a diesel pump; are they aware of other options and the relative cost and sustainability implications; how were original options explained and choices made as to what system to use?	
Qoqodala (Lalini, Mannespoort, Nzolo, Xusha)	Participants said they preferred diesel pumps, as they wanted a continuous service. They were told of other options: windmills are said not to last; springs are too weak and solar power is seen as a limited option. There were those who said they were not aware of alternative technical options. Some would use these alternatives now if they had the choice.
Ngqanda	The participants were not consulted on the choice of technology. The former government imposed the system on them. If they could choose now, they would choose an electric engine because it is less costly to operate and to maintain.
Hewu district (Ama-Qolomba & Upper Hukuwa)	This community chose to use an electric engine and it is very cheap to use. The operator occasionally cleans the pump house, as the engine is an automatic one.

8.4.6.17 In what ways have women's lives changed since the schemes were implemented?	
Qoqodala (Lalini, Mannespoort, Nzolo, Xusha)	They no longer have to travel long distances to fetch water. They can also do other chores as a result of spending lesser time fetching water.
Ngqanda	This scheme does not provide a continuous supply of water. It is therefore difficult to say it has changed women's lives to any extent.
Hewu district (Ama-Qolomba & Upper Hukuwa)	There has been a tremendous change in the lives of women since it is now safer and easier to collect water and time taken is very short.

8.4.6.18 Given the experience so far with the technology chosen, do people feel that they made the correct choice? If not, why not? (e.g. Lalini: 16 of 20 now prefer a protected spring)	
Qoqodala (Lalini, Mannespoort, Nzolo, Xusha)	In the light of subsequent experience with the engine and the need to buy diesel, participants (from Lalini) felt that they did not make the correct technical choice
Ngqanda	They did not make any decision about the choice of technology. They were merely given a diesel engine.
Hewu district (Ama-Qolomba & Upper Hukuwa)	The people in this community feel that they made the right choice of technology

8.4.6.19 Why do 87.5% want yard taps?

Qoqodala (Lalini, Mannelspoort, Nzolo, Xusha)	They wanted to pay for what they used in their own yards and would use some of the water for irrigating their small gardens
Ngqanda	It would be easier to ensure that taps are not vandalised.
Hewu district (Ama- Qolomba & Upper Hukuwa)	Almost all the participants want yard taps. They feel they would be able to take better care of their taps and prevent vandalism.

8.4.6.20 Why does the majority want metered taps?

Qoqodala (Lalini, Mannelspoort, Nzolo, Xusha)	Because they felt that they could then save water as they would be conscious of how much water they used and how much it cost
Ngqanda	They would have to decide on this, because if they had metered taps it would mean that they have to pay for water, something they are not used to.
Hewu district (Ama- Qolomba & Upper Hukuwa)	By installing meters on the taps, people would save a lot of water.

8.4.6.21 What could be done to improve delivery of water in existing schemes?

Qoqodala (Lalini, Mannelspoort, Nzolo, Xusha)	Use the springs to supplement existing water schemes
Ngqanda	Government should lay down the law because in their situation, political tensions make it difficult to decide on anything. If government says that people must pay for operation and management, there must be a mechanism to ensure compliance.
Hewu district (Ama- Qolomba & Upper Hukuwa)	Both these projects have functioned well since they were completed in 1999

8.4.6.22 Why do people say government should pay for operators and/or diesel? How does this relate to their willingness to pay regular contributions for water (service charges)?

Qoqodala (Lalini, Mannelspoort, Nzolo, Xusha)	They are willing to pay but they have no money. They feel that government should help if necessary
Ngqanda	The government has been paying for operators and for diesel. The only problem is that the operators do not do their work and diesel is not delivered when it is needed. People would consider paying if necessary provided it is for a continuous supply.

8.4.6.23 Did people also see the scheme as a job creation initiative?

Qoqodala (Lalini, Mannelspoort, Nzolo, Xusha)	At first that is how they saw the scheme. They were also aware that it was basically a development project as they wanted water
Ngqanda	No, because there were no jobs. Government brought its own workers.
Hewu district (Ama- Qolomba & Upper Hukuwa)	

8.4.6.24 Why were people concerned that they should have had more control over project funding and budgeting?

Qoqodala (Lalini, Mannelspoort, Nzolo, Xusha)	Some people in the community did not trust the committee on funding, especially regarding money allocated for labour
Ngqanda	Participants said they did not have any access to finances.

8.4.6.25 Why were 35% concerned that they didn't get enough technical training?

Qoqodala (Lalini, Mannelspoort, Nzolo, Xusha)	Participants said that there are members of the community who did not get technical training because they were not part of the technical teams that were selected and trained in each village. Also, some did not attend meetings to get clarification on the issue of who should get training.
Ngqanda	There was no training of any kind in this water scheme.

8.4.7 Questions (arising from household interviews and focus groups) put to service providers, local authorities and DWAF

The following groups of questions were formulated to be put to service providers, local authorities and DWAF

8.4.7.1 Questions put to implementing agents

- How did your organisation get involved in the project?
 - What was the nature of the consultation process?
- What was your previous experience in similar projects?
- What was the nature of your consultation process with the community?
- How did you decide on the appropriate technology (appropriate option) for use on the project?
- What was the nature of the training undertaken?
 - Do you have a training manual/format?
 - Do you have an operations & maintenance manual/format?
 - Did you do any evaluation of the impact of training inputs?
- What mentoring process took place?
- Did you do some form of needs assessment?
- What follow-up have you done on the level of efficiency of the system?
- How was the tariff determined (was there consensus) and what has been the community response to it?
- How has the local authority (TRC/DC) been involved in the project and have there been any problems in this regard?
- If you had the opportunity to make changes to current water policy, what would you change/recommend?

8.4.7.2 Questions put to TRCs & District Council

- What was your involvement in the projects?
- How did you get involved
- The Act says...about your role in delivery. What would a practical role in fact be for you?
- What problems did you encounter
 - In project implementation?
 - In ongoing delivery?
- If you had the opportunity to make changes to current water policy, what would you change?
- What was/is your relationship to the implementing agents?
- What was/is your relationship to the water committees?
 - The guidelines say...; what is the reality?
- Do you actually have the resources, time and appropriate skills to deal with water issues?

8.4.7.3 Questions put to DWAF

- What was your involvement in the projects?
 - What was your relationship to the water committees?
- What were the strengths and weaknesses of
 - The implementing agents
 - The TRCs, DC
- If you could change the current policy framework, what would you change?
 - What problems did you encounter
 - In project implementation?
 - In ongoing delivery?
- What ongoing project monitoring & evaluation are you undertaking?
- What were the main reasons for specific failures/successes in the projects?
- How do you see DWAF's ongoing role in delivery in these projects?
- What is DWAF's actual current role?
- What are you doing about projects which are currently not operating (delivering) such as...?
- Research so far shows that a large number of consumers cannot afford the tariff. What do you have in mind to deal with this problem?

8.5 Tables of survey results

Village	1.1 Gender		1.2 # in HH	1.3 Members of HH							1.4 Family members			
	Male	Female		School	Working	Hshld with wkr	Unempl	Pensione rs	Hshld with pens	#	Not here	Hshld with absent member	Send Rs	Hshld with absent contribut or
A(20)	8	12	102	64			25	13	11	102	57	16	18	14
F(17)	7	10	97	53	11	8	17	16	11	97	32	10	12	6
H(7)	1	4	44	23	6	4	12	3	2	44	12	4	11	4
D(20)	9	10	119	67	8	4	33	11	10	119	43	19	19	12
B(20)	3	17	114	58	3	3	44	10	9	114	41	13	12	6
C(20)	6	14	116	56	11	5	34	16	13	119	41	15	22	10
G(20)	7	13	117	53	9	7	39	15	11	103	12	11	9	9
E(20)	7	13	119	58	8	7	36	17	13	101	26	11	16	10
#(144)	48	93	828	432	56	38	240	101	80	799	264	99	119	71
%/average	33.3	66.7	5.75	52.2	0.39	26.4	1.67	0.7	55.6	5.6		68.8		49.3

2.1 Source of water before & now																					
Village	Spring		Pond/dam		Stream/river		Rainwater tank		Communal tap		Windmill		Reservoir		Yard tap		Other		Hospital		
	Before	Now	Before	Now	Before	Now	Before	Now	Before	Now	Before	Now	Before	Now	Before	Now	Before	Now	Before	Now	
A(20)	8	6			20	20														1	
F(17)	1				17	11				12	6					1			5	7	
H(7)			2		7					7	5										
D(20)	4				19					20											
B(20)	5	1	2		17					17						2					
C(20)	1		1	1	18	19		1		19						1					
G(20)					20				20	20	19										
E(20)	3				20		1	1	20	20											
(144)	22	7	5	1	138	50	1	2	40	115	30					4			5	8	
	15.3	4.9	3.5	0.7	95.8	34.7	0.7	1.4	27.8	79.9	20.8					2.8			3.5	5.6	

Village	2.2 Spend less time getting water		2.3 How much of water need met by scheme?					2.4 25 litres always available from tap		2.5 25 litres enough for needs		2.6 Can't always get 25 litres because								
	Yes	No	None	Quarte r	Half	Three quarte rs	All of it	Yes	No	Yes	No	Costs too much	Too far to go	Not enoug h	Takes too long	Doesn' t work	Acces s disput e	Nobod y to collect it	Acces s restrict ed	
A(20)	1	19	20					1	18	4	15			1	1	19				
F(17)	5	12	3	6	6		1	1	16	13	3		16	16	16	16	2			
H(7)	7					6	1	2	4	7								1	1	
D(20)	20				2	6	12	20		17	3	1				1				
B(20)	19	1	1		1	4	14	18	2	17	3		1		1	1				
C(20)	20				3	5	12	18	2	17	3			1		20				
G(20)	20				4	16		2	18	19	1				1		10		19	
E(20)	20			2	6	11	1	3	17	17	2	5	2	13		10	1		17	
(144)	112	32	24	8	22	48	41	65	77	111	30	6	19	31	19	67	13	1	37	
%	77.8	22.2	16.7	5.6	15.3	33.3	28.5	45.1	53.5	77.1	20.8	4.2	13.2	21.5	13.2	46.5	9	0.7	25.7	

Village	2.7 Enough water available for																			
	Washing family		Laundry		Cooking		Drinking		Cleaning house		Brewing beer		Gardening		Irrigation		Building houses		Brick-making	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
A(20)	20		20		20		20		20		20		16	4	2	18	17	3	17	2
F(17)	2	15	2	15	4	13	5	12	3	14	1	16	1	16	1	16	1	16	1	16
H(7)	7		7		7		7		7		7		2	5	1	6	1	6	1	6
D(20)	20		20		20		20		17	3	19	1		20		20	1	19		20
B(20)	19	1	19	1	19	1	19	1	19	1	16	4	5	15		20	1	19	2	18
C(20)	20		20		20		20		16	4	14	6	1	19		20	1	19		20
G(20)	20		20		20		20		20		17	3		20		20		20		20
E(20)	20		18	2	20		20		20		18	2	1	19		20	2	18	2	18
(144)	128	16	126	18	130	14	131	13	122	22	112	32	26	118	4	140	24	120	23	120
%	88.9	11.1	87.5	12.5	90.3	9.7	91	9	84.7	15.3	77.8	22.2	18.1	81.9	2.8	96.2	16.7	83.3	16.7	83.3

Village	3.1 R/m paid	3.2 Can afford		3.3 Prepared to pay more for			3.4 Pay for other uses		3.5 Contribution made to help build			
		Yes	No	Constant	Yard tap	All uses	Yes	No	Cash	Pd labour	Unpd lab	Materials
A(20)	117	3	16	1	10	1	4	14	18	11	1	
F(17)	50	1	11	2	2			11			11	
H(7)	140	6	1		6	1	6	1	1	7		
D(20)	154	10	10	5	9	8	12	7	9	12	1	3
B(20)	112	13	7	2	12	3	11	9	8	12	4	4
C(20)	174.5	14	6	6	13	11	11	9	5	13	3	1
G(20)	200	13	7	1	15		7	13		19		
E(20)	230	10	10		16	1	8	12		13		
(144)	1177.5	70	68	17	83	25	59	76	41	87	20	8
Ave/%	8.18	50.7	49.3	11.8	57.6	17.4	41	52.8	28.5	60.4	13.9	5.6

Village	4.1 Right govt paid for infrastructure			4.2 Community should pay			4.3 Community should maintain			4.4 Govt should pay for O&M			4.5 DC should maintain			4.6 DC able to maintain			4.7 Community not consulted		
	Agree	Disagree	Not sure	Agree	Disagree	Not sure	Agree	Disagree	Not sure	Agree	Disagree	Not sure	Agree	Disagree	Not sure	Agree	Disagree	Not sure	Agree	Disagree	Not sure
A(20)	19		1		20		20			12	8		11	8	1	3	5	12	1	18	1
F(17)	16		1	1	16		3	13	1	17			7		10	2	1	14	16	1	
H(7)	7				7		7			1	5	1		3	4		2	5	2	5	
D(20)	16		4	4	12	4	18	2		11	7	2	5	11	4	4	9	7	5	12	3
B(20)	17		3	3	16	1	19	1		7	13		5	12	3	5	11	4	7	12	1
C(20)	18	2		7	13		19	1		12	7	1	10	9	1	4	11	5	1	16	3
G(20)	20			1	19		20			7	13			8	12		8	12	4	12	4
E(20)	20				19	1	16	3	1	12	8		1	6	13		6	14	13	3	4
(144)	133	2	9	16	122	6	122	20	2	79	61	4	39	57	48	18	53	73	49	79	16
	92.4	1.4	6.2	11.1	84.7	4.2	84.7	13.9	1.4	54.9	42.4	2.7	27.1	39.6	33.3	12.5	36.8	50.7	34	54.9	11.1

Village	4.8 Community was consulted			4.9 Community priority			4.10 Didn't ask, shouldn't pay			4.11 Water too expensive			4.12 Didn't ask, shouldn't pay			4.13 Should be provided free			4.14 Should pay for water used		
	Agree	Disagree	Not sure	Agree	Disagree	Not sure	Agree	Disagree	Not sure	Agree	Disagree	Not sure	Agree	Disagree	Not sure	Agree	Disagree	Not sure	Agree	Disagree	Not sure
A(20)	19		1	15	3	2	2	17	1	9	10	1	7	13		8	11	1	18	1	1
F(17)	6	10	1	16		1		16	1		11	6	8	7	2	10	7		9	8	
H(7)	6	1		5		2		7		2	5			7			7		7		
D(20)	18		2	16	3	1		18	2	4	16		3	14	3	4	16		18	2	
B(20)	17		3	17		3		20		5	14	1	2	17	1	3	16	1	14	5	1
C(20)	13	6	1	12	7	1	1	16	3	3	16	1	1	15	4	6	10	4	16	3	1
G(20)	14	4	2	19		1		19	1	10	9	1	6	14		6	14		14	6	
E(20)	3	13	4	15	4	1	4	14	2	12	8		5	14	1	11	8	1	9	11	
(144)	96	34	14	115	17	12	7	127	10	45	89	10	32	101	11	48	89	7	105	36	3
	66.7	23.6	9.7	79.9	11.8	8.3	4.9	88.2	6.9	31.3	61.8	6.9	22.2	70.1	7.7	33.3	61.8	4.9	72.9	25	2.1

Village	4.15 Easier to get water now			4.16 Community trained to O&M			4.17 Able to O&M			4.18 Assisted to set up water committees			4.19 Water committees trained			4.20 Not enough money for diesel			4.21 Pump often breaks down		
	Agree	Disagree	Not sure	Agree	Disagree	Not sure	Agree	Disagree	Not sure	Agree	Disagree	Not sure	Agree	Disagree	Not sure	Agree	Disagree	Not sure	Agree	Disagree	Not sure
A(20)	2	17	1	16	2	2	12	3	5	17	1	2	14	1	5	20			4	16	
F(17)	5	12		3	5	9		6	11	1		16	1		16	12	2	3	15	2	
H(7)	7			7			7			7			7				7			7	
D(20)	20			16		4	18	1	1	18	1	1	17		3	8	12		3	14	3
B(20)	19	1		18		2	19		1	18		2	19		1	5	13	2		19	1
C(20)	20			15		5	15	3	2	17		3	15		5	6	13	1		19	1
G(20)	20			19		1	19		1	19		1	19		1	1	19			20	
E(20)	20			15		5	15		5	14		6	14		6	14	5	1	10	9	1
(144)	113	30	1	109	7	28	105	13	26	111	2	31	106	1	37	66	71	7	32	106	6
	78.5	20.8	0.7	75.7	4.9	19.4	72.9	9	18.1	77.1	1.4	21.5	73.6	0.7	25.7	45.8	49.3	4.9	22.2	73.6	4.2

Village	4.22 Nobody to fix pump			4.23 Water too expensive			4.24 Water not always available			4.25 Water of poor quality			4.26 30% should be women			4.27 Women should be involved			4.28 Women involved in O&M		
	Agree	Disagree	Not sure	Agree	Disagree	Not sure	Agree	Disagree	Not sure	Agree	Disagree	Not sure	Agree	Disagree	Not sure	Agree	Disagree	Not sure	Agree	Disagree	Not sure
A(20)	3	16	1	6	13	1	19		1	15	5		19		1	19		1	20		
F(17)	8	3	6	1	16		16	1			16	1	4		13	17			15	1	1
H(7)		7			7			7		1	6		7			7			7		
D(20)	9	10	1	1	19		3	17		1	19		15	1	4	19		1	18	2	
B(20)	2	15	3		20		1	19		4	16		14	2	4	18		2	15	1	4
C(20)	11	7	2		20		3	17			20		11	3	6	15		5	15	1	4
G(20)		20			20			20			20		12	1	7	20			20		
E(20)	8	8	4	3	17		16	4		2	17	1	7		13	20			19	1	
(144)	41	86	17	11	132	1	58	85	1	23	119	2	89	7	48	135		9	129	6	9
	28.5	59.7	11.8	7.6	91.7	0.7	40.3	59	0.7	16	82.6	1.4	61.8	4.9	33.3	93.8		6.2	89.6	4.2	6.2

Village	4.29 Women shld spend less time			4.30 Windmill better than diesel			4.31 Protected spring better			4.32 Hand pump better		
	Agree	Disagree	Not sure	Agree	Disagree	Not sure	Agree	Disagree	Not sure	Agree	Disagree	Not sure
A(20)	20			3	17		16	4		4	16	
F(17)	17			1	16			17		1	16	
H(7)	7				7			7			7	
D(20)	20			4	16		3	16	1	3	17	
B(20)	20				18	2	2	17	1		18	2
C(20)	18	1	1	1	16	3	2	15	3	1	14	5
G(20)	20				20			20			20	
E(20)	20			6	14			19	1		20	
(144)	142	1	1	15	124	5	23	115	6	9	128	7
%	98.6	0.7	0.7	10.4	86.1	3.5	16	79.9	4.1	6.3	88.9	4.8

Village	5.2 Recommend to improve supply								5.3 Other			5.4 Improve management by				
	Protect ed	Windmil ls	Yard taps	Tanks	Meters	Other	Communal	Solar	Communal tap	Train mechan ic	Dam river	All to pay	Govt pay for diesel	Govt pay for operators	Measure use & pay	Prepayment meters
A(20)	16	3	19		19	1			1			7	2	2	18	
F(17)		1	17		10							9	8	16	7	
H(7)			6		6	1			1			7	1	3	6	1
D(20)			16		4	2			1	1		9	7	9	2	3
B(20)	2		17	1	2							8	8	4	5	1
C(20)	4	1	17	2	4	1					1	8	7	14	5	1
G(20)			18		14	2		1		1		15	5	13	12	5
E(20)		7	16	1	14	4	1	3				12	8	12	10	
(144)	22	12	126	4	73	11	1	4	3	2	1	75	46	73	65	11
%	15.3	8.3	87.5	2.8	50.7	7.6	0.7	2.8	2.1	1.4	0.7	52.1	31.9	50.7	45.1	7.6

Village	5.5 How govt/agency has helped						5.6 Other	5.7 Problems with govt/agents							
	Funding	Proj mtngs	Proj mgt	Training	Paid lab	Other		Consult	Plannin g	Tech trg	Org trg	Proj funds	Women	Jobs	Paymen t
A(20)	19	19	19	19	19									13	2
F(17)	16	1	5		2			14	15	16	17	17	17	17	15
H(7)	7	7	7	7	7						1	7		2	4
D(20)	19	12	10	15	13			1		5		1		4	1
B(20)	20	12	8	18	14							1	1	5	1
C(20)	18	10	7	15	11					6				2	2
G(20)	20	20	19	20	20			3	9	2	8	16	4	14	7
E(20)	20	13	15	14	20			15	12	21	8	16	7	13	10
	139	94	90	108	106			33	36	50	34	58	29	70	42

Village	6.1 Aware of Water Services Act		6.2 Understanding							6.3 main concerns											
	Yes	No	25l/person/day	should be meter	only use water for specific purposes	Involve women	Don't waste	Community management	Legis governs use	Extra pipes	Community participation, involvement	Not enough diesel	Community cash contributions	Didn't create jobs	Spare parts	Operator problem	Operator's wages	Insufficient water	Hospital supply inadequate	Govt not delivering on promises	Want yard taps
A(20)	1	19	1	1						1	1	12	6	1	1	1	3				
F(17)		17									1		1					6	1	1	1
H(7)		7									1		1					2			
D(20)	2	18	1		1	1										1	1	1			
B(20)	2	18	1				1						4				2				
C(20)	2	18						1	1				3				1	1			2
G(20)	4	16	4			1									1	1	1	1			2
E(20)	2	18	2												1	2	1			1	4
(144)	13	131	9	1	1	2	1	1	1	1	3	12	15	1	3	5	9	11	1	2	9
%	9	91	6.3	0.7	0.7	1.4	0.7	0.7	0.7	0.7	2.1	8.3	10.4	0.7	2.1	3.5	6.3	7.7	0.7	1.4	6.3

Village	6.3 main concerns...																			
	Shou ldn't pay	Opera tor paid for nothin g	O&M not done by people emplo yed	Not servin g comm unity interes ts	Nobod y in charg e	Vanda lism of comm unity taps	Non- payers use more than payers	Peopl e must pay	Punis h default ers	Govt must run engine	Water for irrigati on	Water for brickm aking	Provid e for indige nts	Water for stock	Gover nance trg	Govt help pay operat or	Tap too far	Dama ge to engine	Anoth er dam	Not enoug h taps
A(20)																				
F(17)	1	3	1	1	1															
H(7)						2	1													
D(20)			1					2	1	2	4	1	1	1						
B(20)			1			1					3				1	1	2	1	1	
C(20)			2			1		1		1				1		2	1	1	1	1
G(20)						1		1	2	4	1		1			3				
E(20)		1	1		1		2	2	1	8			1							
(144)	1	4	6	1	2	5	3	6	4	15	8	1	3	2	1	6	3	2	2	1
%	0.7	2.8	4.2	0.7	1.4	3.5	2.1	4.2	2.8	10.4	5.6	0.7	2.1	1.4	0.7	4.2	2.1	1.4	1.4	0.7

Village	6.3 main concerns		
	Affordability	Rich subsidise poor	Engine replacement when broken
A(20)			
F(17)			
H(7)			
D(20)			
B(20)			
C(20)	1		
G(20)	1	1	3
E(20)			2
(144)	2	1	5
%	1.4	0.7	3.5