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ASSESSMENT OF WATER RESOURCE MANAGEMENT PRINCIPLES:

STUDY OF TWO MVULA TRUST PROJECTS IN MPUMALANGA, SOUTH AFRICA

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28 August 1997

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CONTENTS

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Preface

This final report is the product of many hours of work carried out by three individuals: Firstly, Cecil Chibi, who was part of the Preparatory Workshop and who co-ordinated and planned most of the study; secondly Audrey Lubisi and Dzunani Nyathi, Project Development Facilitators in the Mvula Trust's Mpumalanga office, who conducted all of the field work and who collated and provided the analysis of the received information.

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South Africa
28 August 1997

Introduction

The Mvula Trust

The Mvula Trust is an independent funding agency with a mandate to support sustainable water and sanitation service development amongst poor and disadvantaged rural South Africans. The Trust works in close partnership with the Department of Water Affairs and Forestry (DWAF), with whom it has a collaborative agreement and whose representatives sit on the Board of Trustees, the Department of Constitutional Development (DCD), and other governmental and independent South African agencies. It also has the support of several international agencies. The Trust operates a demand-responsive fund for community-managed water and sanitation projects (CWSS) and is presently implementing over 300 such projects. The principle areas of operation are in the provinces where water and sanitation services are inadequate, namely the Eastern Cape, Kwazulu-Natal, Mpumalanga and the Northern Province. Each of these provinces has an office staffed by engineers and social scientists responsible for supervision of project implementation. In addition, the Trust has a head office (located in Gauteng) which implements various research and policy related projects. Consequently, the Trust has made a significant contribution towards policy development and capacity building through implementation of innovative micro-policies, pilot project development and capacity building activities.

A central concern in the CWSS sector is the sustainability of projects - clearly, without ownership, long term sustainability is unlikely. It is precisely because of this concern that the Trust only involves itself in projects where the communities demonstrate a desire to be partners throughout the project development cycle. To enhance this partnership, the Trust allocates, as a matter of policy, a significant amount of a project budget towards training and capacity building.

Mvula Trust projects are initiated through applications from rural communities requesting assistance with the development of their water and/or sanitation requirements. Having received the application, the Trust facilitates contact with appropriate project agents who assist communities with the production of a feasibility report and with the awareness of its required institutional arrangements. Thereafter, the Trust will allocate a socio-technical team to further facilitate the project development which will eventually culminate in a contract between the Water / Sanitation Committee and the Trust.

Once the contract has been signed, a training agent is employed by the committee to ensure that the requisite capacity building takes place. Having completed the training, the infrastructure development takes place and progresses to completion with the committee taking the lead and the project agent/ training agent/ Mvula Trust

K.A. Jeenes
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South Africa

tripartite providing close support.

The Study

High population growth rates, rapid urbanisation, unsustainable exploitation of water resources for industrial and agricultural purposes, as well as the continued degradation of freshwater resources through waste discharges, are but some of the factors which have in the past led to improper water resource management (WRM) in many developing countries. Over the water decade (and thereafter), integrated water resource management has featured prominently at a number of global meetings, conferences and symposia (e.g. the 1992 Rio de Janeiro Earth Summit) resulting in the international acceptance and recognition of a number of primary WRM principles and approaches for the potable water supply and sanitation sector. These principles can now form the basis for sound integrated WRM when water and sanitation projects are developed.

The principles have been defined as follows:

Principle 1: Water source and catchment protection are essential

Principle 2: Adequate Water Allocation needs to be agreed upon between stakeholders.

Principle 3: Efficient water use is essential and often an important water source

Principle 4: Management needs to be taken care of at the lowest appropriate level

Principle 5: The involvement of all stakeholders is required

Principle 6: Striking a gender balance is needed as activities relate to different roles of men and women

Principle 7: Skills development and capacity building are key to sustainability

Principle 8: Water is treated as having an economic and social value

The following study was initiated by the International Water and Sanitation Centre (IRC) and carried out on two Mvula Trust funded projects in South Africa's Mpumalanga Province (the Tonga Water Project, and the Mohlala Water Project).

Despite the unique historical circumstances which have brought South Africa to its

current situation - circumstances which it patently have adversely affected their approach to water management - findings from this participative assessment to evaluate the implementation of these WRM principles, indicate an encouraging degree of adherence.

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South Africa
28 August 1997

1. Overview of Water Resources

1.1 Historical and Provincial Context

The project study was undertaken in the province of Mpumalanga, located on South Africa's eastern side. Before the advent of a democratic government in South Africa, Mpumalanga had been comprised of what was referred to as 'self-governing homelands', and of a single 'white' province. The latter was known as the Eastern Transvaal; the former were individually known as Gazankulu, Lebowa, Kangwane and Kwandebele.

While the former Eastern Transvaal was characterised by large, well irrigated agricultural farmlands, and towns and villages well served with all of the basic services (such as water, sanitation, electricity, communications etc.), the 'homelands' were located in the drier, drought-prone regions. They were administered – without exception – by governments controlled by the South African apartheid state. As a result, corruption was widespread and the provision of basic services was extremely poor. Though, with the democratic government, some changes have begun to be instituted, there is still an enormous backlog which needs to be addressed. High on the priority list is the provision of water and sanitation: Within Mpumalanga, of an estimated provincial population of 3.1 million, approximately 1.4million (44%) people are in need of a reliable water supply, while 2.0 million (65%) do not have access to adequate sanitation facilities.

As one moves from western to eastern Mpumalanga, one moves generally from higher to lower mean annual rainfall (MAR) - the highest being approximately 1200mm, the lowest approximately 400mm. This fact, coupled with the historical context, has resulted in a province characterised by contradictions. This is especially evident in the water supply: the former 'white' areas are generally supplied by large bulk water schemes, reliable and well operated and maintained; the former 'homelands' are characterised either by small / medium sized bulk schemes, extremely poorly operated and maintained, or by ground water supplies. The latter are generally equipped with diesel pumps (again, poorly operated and maintained), or by handpumps. Where there is no supply, water is transported into the relevant areas by government or private agencies. Except for the former white areas, where water is paid for at a highly subsidised rate, payment for water provision is virtually non-existent. Though it is the expressed desire of the government to ensure that people pay for water, and that management of all of the country's water supply is devolved the lowest feasible body (normally local government or catchment authority), due to both administrative difficulties associated with taking over from past 'homeland governments' and with the lack of resources and skills of the newly elected local governments, much of the O&M is still being carried out by the same authorities of the past.

K.A. Jeenes
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South Africa
28 August 1997

1.2 Specific Project Location

Two Mvula Trust projects were chosen for the study.

1.2.1 Tonga Water Project

In this project, the area under consideration - Tonga - is located in the far eastern side of Mpumalanga, and formerly fell within the Kangwane 'homeland'. The region falls within what is known as the Lowveld, and is relatively dry, having a MAR of approximately 450 mm. In terms of topography, it is a very flat area with a height above sea level between about 350 and 400 metres. The co-ordinates of the study area are approximately 25° 15' S and 31° 48'E.

Tonga has a population of approximately 120,000 people living in 11 separate villages, all of which are supposed to be served by the Tonga Purification Works, a plant which extracts directly from the largest and only perennial river in the region, the Komati. However, the plant cannot meet the needs of much of the population and, to assist in alleviating the problem, the Trust funded an extension to this supply. The construction of this extension was completed in June of this year. The villages which are primarily being served by this extension are known as Dludluma and Tonga Block B (together, they have a population of approximately 20,000).

Characteristic of the Tonga distribution network, is a widespread problem of informal connections. These connections have been entirely uncontrolled, and as a result, the water from the works does not reach many of its intended reticulation lines. A further problem is that of non-payment for the water received. Therefore, running parallel with the Mvula Trust funded project, the Department of Water Affairs & Forestry commissioned an investigation into the supply and distribution network from the Tonga Purification Works. The results of this study have not yet been finalised, but it has been made clear that a serious problem does exist with informal connections.

1.2.2 Mohlala Water Project

The village of Mohlala is located at an elevation of between 1300 and 1800 metres above sea level, and has a MAR of approximately 600mm. The surrounding topography is typically undulating. Its co-ordinates are 24 35' S and 30 45' E. The village has a population of approximately 8000 residents and is served by two boreholes equipped with electrically driven submersible pumps. The installation of these pumps and a limited number of standpipes was funded by the Department of Water Affairs under their drought relief programme. This programme does not allow for input from the beneficiaries, and as such, is payment for both the installation itself, and for the water which flows form it, does not happen.

In June of last year, the Trust approved funding to adequately reticulate the water from the boreholes into village standpipes. The construction of this has recently been completed.
In addition to the above borehole supply, water is also abstracted – by hand – directly from a nearby river, the Kadishi.
2.

K.A. Jeenes
The Mvula Trust, Nelspruit
South Africa
28 August 1997

Overall Assessment Method

2.1 Office

The assessment was planned and co-ordinated by the Mvula Trust's Technical Manager (Water), Cecil Chibi. Cecil is based in the Trust's head office in Johannesburg, and as the field work took place in projects located in the province of Mpumalanga, it was necessary for him to undertake visits to both the regional office in Nelspruit, and to the project locations themselves.

In the regional office, three personnel were required to assist in the study's execution: Ken Jeenes, the Trust's Regional Co-ordinator, who co-ordinated from a regional perspective; and Dzunani Nyathi and Audrey Lubisi, both Project Development Facilitators (PDF's), who conducted the assessments at a field level.

The first meeting in the regional office took place early in February of this year. This initial meeting was between Cecil Chibi and Ken Jeenes, and its primary purpose was to draw up an Assessment Plan. The outcome was a table, which identified necessary activities and the personnel who were to carry them out, as well as a relevant time frame.

This first meeting was also used to identify relevant stakeholders within each project location, and to further identify relevant methodology / tools to be utilised in assessing their attitude and / or adherence to the identified WRM principals.

A second meeting was held early in March where the WRM principles were workshopped with Dzunani Nyathi and Audrey Lubisi, and where the finer details of the methodology to be used were finalised.

2.2 Field

The field investigations for both projects took place during early March. The relevant stakeholders were identified as follows:

Tonga: ordinary residents of the area, the Induna (local chief), members of the Reconstruction and Development Committee (RDC), members of the Tonga Water Project Steering Committee. They were all present at one single workshop/meeting where the issues were discussed and debated.

Mohlala: ordinary residents of the village, members of the Reconstruction and Development Committee (RDC), members of the Mohlala Water Committee, local farmers, and school children (both primary and secondary). In this case, all groups were interviewed separately.

It is worth mentioning that, though both Audrey and Dzunani have some experience in the use of Participatory Rural Appraisal methodology (PRA), both decided against using this method. The reasons for this decision were highlighted as follows: Firstly, they both felt that from their experiences in the past, a large amount of time was required for each PRA activity and that people within the context in which these projects were being run, generally did not have the required time available to them. Secondly, it was felt that the PRA activity itself (be it drawing timelines, mapping etc) often tended to distract people from the objective of the particular exercise. They therefore decided to carry out their investigation using a structured – though highly participative - interview approach. This approach resulted in lively debate and widespread participation from all present at the interviews. The results of the interviews were written up in report format which was initially given to Cecil for analysis, and later to Ken for incorporation into [this] Assessment Report. The underlying philosophy of the methodology was summed up by Audrey in her report written after she had completed the Mohlala study :

> *'The basic idea was that people should become agents of research rather than objects of research, and that they should view this study as part of learning not just information giving.'*

One potential problem envisaged from the start of the study, and which was later proven to be the case, was the fact that people in a rural context would have difficulty fully understanding the intricacies of the WRM principles. This problem was exacerbated by the fact that both Audrey and Dzunani found it problematic translating words and phrases such as 'catchment protection', 'water resource allocation', 'the economic and social value of water', etc. However, it is important to note that once the principles had been translated and explained, people did understand and were in fact generally already aware of their importance (though their descriptions would have been a lot simpler).

3. Water Resource Management Principles Addressed

3.1 Principle 1: Water source and catchment protection are essential

3.1.1 Tonga

3.1.1.1 Background

As is noted in 1.2.1 above, there is a widespread problem of informal connections throughout the distribution network from the Tonga purification works. It was with this in mind that the Trust and DWAF proceeded with the two parallel projects – an extension of the system, coupled with an in-depth investigation into the problems of the existing network.

3.1.1.2 Results

The people in the meeting were all unanimous in the endorsement of the principle of water source and catchment protection. Their reasons were cited as follows:

- Many do not receive any water from the bulk distribution system, though there are standpipes within their area: They realised that with proper management of the system their situation would be improved.
- Many collect their water directly from the river; it is further used for washing clothes, for personal washing, and for swimming: They are aware of the fact that the water is not always clean and contains potentially life-threatening bacteria (diseases such as diarrhoea, typhoid, and bilharzia were mentioned).
- The region has a very unstable weather pattern: In 1984 the interviewees reported floods in the region; in 1992, the Komati River dried up; in 1995 the river flowed at full capacity. This unpredictability emphasised the need for protection of both the source itself, as well as of the catchment in general.

3.1.2 Mohlala

3.1.2.1 Background

Mohlala has, as noted above, two primary water sources – the Kadishi River, and the two recently equipped boreholes. The latter source was reticulated with Mvula Trust funds and formed the basis of this project. Though it was not explicitly stated, in this project (as in all Mvula Trust projects) borehole supplies are only designed to deliver at what is considered to be a sustainable rate i.e. a rate, which will not deplete the borehole under normal climactic conditions.

3.1.2.2 Results

All participants considered water source and catchment protection to be very important. Before the boreholes were drilled (in late 1995) the Kadishi River had been their primary water source. Some interviewees remembered as far back as 1953 when the river used to flow very strongly. Nowadays, they said it had a much lower flow volume. This reduction in flow rate was put down to drought (though it is more likely to be due to the widespread afforestation that has taken place throughout the region).

The burning of grass, with its resultant soil erosion, was seen as being another potential cause of the depletion of the river water.

As a result of this depleting water source, many people have abandoned their agricultural farming practices; similarly, the number of livestock has greatly decreased over the years.

3.2 Principle 2: Adequate Water Allocation needs to be agreed upon between stakeholders.

3.2.1 Tonga

3.2.1.1 Background

Generally, within a rural South African context where the water is supplied is from a groundwater source, formal water allocation generally does not take place - one takes according to one's needs and continues to do so until the supply is no longer adequate. However, in the case of a bulk supply, though rural South Africans have historically not had much say in how water is allocated, they are generally aware, for example, if a dam supplies water to farming or to industry and does not supply to them. In apartheid South Africa, any form of protest was pointless, though under the new system, a lot more lobbying is beginning to take place to some local control of water allocation.

3.2.1.2 Results

Within the Tonga area, it was reported that the most notable users of the water are the domestic water users, farmers (both agricultural and livestock) and a large bakery. No structure exists to make decisions on how the water is (or should be) allocated. However, it was felt that the formation of the Reconstruction and Development Committee (RDC) in 1995 was intended to assist in this regard.

3.2.2 Mohlala

3.2.2.1 Background

See 3.2.1.1

3.2.2.2 Results

It was reported that the most notable users of water in the Mohlala village are the domestic water users, farmers (both agricultural and livestock), builders, and the school (which has a relatively large agricultural garden). Before the advent of the Mvula Trust funded project, no formal structure existed to control water use and allocation. However, with the formation of the Mohlala Water Committee, it is envisaged that water allocation will now be more rigorously controlled.

3.3 Principle 3: Efficient water use is essential and often an important water source

3.3.1 Tonga

3.3.1.1 Background

It seems to be an ironic truism within South Africa's water scarce rural regions that despite the scarcity, it is often the case that water is not efficiently used, and is often unnecessarily wasted. Leaking standpipes, standpipes simply left running, pipelines left to leak for months etc., are common sights. Though the reasons for this may be multifarious, there is little doubt that a lack of ownership and lack of payment contributes greatly to the situation. If it could be ensured that people felt that the system belonged to them, and that they paid for the water which came out of the taps, far more efficient usage would result.

Fundamental to all of the projects funded by the Trust is that of ownership and payment and it is highly unlikely that they would approve projects where it appears that either of these aspects is going to be a problem.

3.3.1.2 Results

It was interesting to note that many of the participants did not see inefficient use and wastage of water as a major problem, though they did acknowledge that its occurrence was quite widespread. After further discussion, it became apparent that they did not consider the cumulative affects of the wastage and later acknowledged that efficient water use could in fact be an important source.

3.3.2 Mohlala

3.3.2.1 Background

See 3.3.1.1 above

3.3.2.2 Results

The Mohlala participants were divided on the importance of this principle: The water committee considered that there was inefficient use and wastage of water in the village. The rest of participants felt that this was not the case. The committee presented some examples of wastage:

- Cattle owners give drinking water to their livestock during the dry winter months.
- Children leave taps running – they did note that this was often due to the particular type of standpipe in place: often they are difficult to open, and therefore, once open, the children do not bother to close them again.
- Though they (the committee) has warned against this, the cattle owners often leave their cattle to wander around and they quite regularly open the taps with their horns (whether it was intentional or not, it was not said – presumably it occurs while the cattle are trying to drink from the pools that gather around the standpipe).

3.4 Principle 4: Management needs to be taken care of at the lowest appropriate level

3.4.1 Tonga

3.4.1.1 Background

South Africa is at an interesting stage in terms of the development of its institutional structures for the management of water. In June 1995, legislation was drafted in a White Paper that proposed that village water committees be given statutory status to manage their own water at a local level. However, this was changed after the local government elections of November 1995. It was subsequently argued that the local government should become the legislated authority responsible for the management the service delivery of water, and that management of the resource itself should be carried out in a regional or catchment basis. *The White Paper on Water Policy*, as approved by the Cabinet of the South African government on 30 April 1997 states,

> Water services shall be regulated in a manner which is consistent with and supportive of the aims and approaches of the broader local government framework.
>
> (*The White Paper on Water Policy* 30 April 1997, p. 47)

and,

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The Mvula Trust, Nelspruit
South Africa
28 August 1997

> Responsibility for the development, apportionment and management of available water resources shall, where possible and appropriate, be delegated to a catchment or regional level in such a manner as to enable interested parties to participate.
>
> (Ibid., p. 47)

Unfortunately, however, in the rural context, most (if not all) local governments lack both the skills and the resources to manage the water supply and delivery in their respective areas.

At present, therefore, extensive capacity building exercises for local governments are being started throughout rural South Africa. But it is going to be some years before they will be in a position to efficiently and effectively manage their systems. Before the advent of the local government elections, the Mvula Trust worked with elected village water committees whom they ensured were trained to effectively manage their water systems after the particular project had been completed. Now with local government in place, the Trust is beginning to work with project steering committees comprised of both the original water committees, as well as representatives from the local government. In fact, the Trust will no longer fund a project unless it (the project) has the full support of the relevant local government.

3.4.1.2 Results

All participants noted that the current status of operation and management of the water supply system was disjointed: DWAF, the local government and the RDC were all involved to varying extent in trying to manage the system. Also involved is the Farmer's Association who attempts to ensure that enough irrigation water is available for their crops. They all agreed and were looking forward to the day when the local government was fully capacitated to effectively and efficiently operate, maintain, and collect tariffs from their system.

3.4.2 Mohlala

3.4.2.1 Background

See 3.4.1.1 above

3.4.2.2 Results

As with Tonga, it was reported that there is as yet not a single body that looks after the supply of water to Mohlala. DWAF is still involved with the original system (i.e. the two boreholes pumps), whereas the water committee is beginning to maintain

the new and at this stage considers this to be their role. Hovering on the outskirts are local government officials who feel that it should be their role but are aware that they do not as yet have the capacity.

3.5 Principle 5: The involvement of all stakeholders is required

3.5.1 Tonga

3.5.1.1 Background

In the apartheid South Africa, water resource management was carried out by DWAF and / or the relevant 'homeland' government. There was no consultation with any stakeholders and if water was provided, it was done so by people and agencies from outside of the area. Naturally, when problems arose with the water delivery, the intended beneficiaries were largely powerless, and had to contact the often-nameless provider who invariably took weeks, or even months to correct the problem.

Since the 1994 elections, the South African government has put into place a policy which it is hoped will ensure as much stakeholder input as is practical and feasible. The Trust is in complete agreement with this approach and takes care to emphasise the need for all interested and affected parties to remain informed of the project throughout its life. This is made clear in its *Mission and Vision Statement* :

> The Mvula Trust is committed to ensuring the full participation of the communities it serves and that through its facilitation, that communities are empowered to sustain the development initiatives that have been launched.

3.5.1.2 Results

On this principle there was not much discussion. Participants noted the iniquities of the past non-participative system but said that now, with RDC in place, and with the elected PSC, all stakeholders had adequate representation.

3.5.2 Mohlala

3.5.2.1 Background

See 3.5.1.1 above

3.5.2.2 Results

Again, as with Tonga, there was not great discussion around this principle. In their

opinion, the water committee was representative enough of all stakeholders in the village.

3.6 Principle 6: Striking a gender balance is needed as activities relate to different roles of men and women

3.6.1 Tonga

3.6.1.1 Background

Gender issues have been given a relatively high profile in the new South Africa, and though much of this remains 'lip-service', some genuine attempts are being made to address the rights of women in general society. Within the water sector, it is a known fact that in the rural context, women are the people most closely associated with water collection and use. The Mvula Trust therefore emphasises the importance of their role – both as administrators and as labour in the project . However, for the moment, the reality remains that South Africa is a patriarchal society, dominated almost entirely by men.

3.6.1.2 Results

The Tonga RDC is comprised of six women and eight men; the PSC has just two women and six men. Though women are encouraged to take an active role, it was, however, noted that they are not as active as the men, and that most of the decisions are taken by the men. This, is was said, is a result of the culture of the society – women are generally not supposed to talk in public, especially in the presence of men, and particularly on issues of public interest.

The attendance of meetings was also sometimes problematic for women – for example, the PSC meets every Saturday morning at 09h00. This suits the men, but not the women who reported that their husbands expected them to be at home with them then. Another problem was the fact that their husbands would become jealous or suspicious of them meeting with other men.

3.6.2 Mohlala

3.6.2.1 Background

See 3.6.1.1 above

3.6.2.2 Results

There are four women and five men represented on the water committee. However, as in the case of Tonga, their participation remains limited (due essentially to similar

cultural constraints).

3.7 Principle 7: Skills development and capacity building are key to sustainability

3.7.1 Tonga

3.7.1.1 Background

The Trust's policy is underpinned by the philosophy of this principle. As was noted earlier, its *Mission and Vision Statement* emphasises that 'through h its facilitation, ... communities are empowered to sustain the development initiatives that have been launched. Its policies document further states that,

> A major focus of the Trust's mandate is the development of capacity among local, user-representative, sector bodies. Its primary mechanism for supporting training and education initiatives in these bodies will be via project support
>
> (*The Mvula Trust: Specific Policies for Water and Sanitation Project Development p7-1)*

3.7.1.2 Results

The training which had been provided to the Tonga PSC had also bee provided to all of the eleven village water committees in Tonga. Unfortunately, however, given the scale and the type of system (i.e. large bulk supply), it would be an impossible task for the PSC to effectively manage it. Thus, in this case, it was agreed by all present that though their training had been very useful, it would still be the local government who would ultimately be responsible for an effective service delivery.

3.7.2 Mohlala

3.7.2.1 Background

See 3.7.1.1 above

3.7.2.2 Results

It was unanimously agreed that the training provided during the Mvula project had been very useful, and would contribute greatly to the chances of the project being successfully operated and maintained once it was completed.

3.8 Principle 8: Water is treated as having an economic and social value

3.8.1 Tonga

3.8.1.1 Background

Payment for water in rural South Africa has always been virtually non-existent. As has been mentioned elsewhere in this report, service delivery has been generally bad and participation by, and empowerment of, stakeholders did not occur at any level. People relied on the charity (or otherwise) of central (or 'homeland') government. They did not pay, and they could not question. With the new government, however, this culture of non-payment is set to end. As is stated in *The White Paper on Water Policy* 30 April 1997

> Beneficiaries of the water management system shall contribute to the cost of its establishment and maintenance on an equitable basis. (p.47)

However, there is quite widespread resistance to payment, linked to great expectations of the new government. Often it is asked why people should pay for services now that they have a democratic government, when they did not even have to pay under the apartheid government.

The Trust has always been firmly committed to the philosophy of payment for water – both at project level where financial contributions are expected, as well as post project, when all users are expected to pay according to some pre-determined tariff structure for the water which they use.

3.8.1.2 Results

People agreed that payment for water is important. However, they did state payment was only likely if the service was good i.e. that they received the required amount of water in a reliable manner. It was also agreed that non-payment by some people could affect the willingness to pay of those who would otherwise be willing.

3.8.2 Mohlala

3.8.2.1 Background

See 3.8.1.1 above

3.8.2.2 Results

As with Tonga, people were in general agreement with the principle of payment for water. However, they also noted similar concerns. In addition, it was said that at election time in 1994 the politicians in their region had promised free services. Nonetheless, they did realise that this had been mere electioneering and re-confirmed their commitment to the principle of payment.

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4. Conclusion

As is noted many times throughout this document, South Africa has a unique political, social and economic history, which has undoubtedly adversely affected its approach to water management. Any study which attempts to examine its adherence to the primary water management principles must therefore always be seen in this unique context.

The two water implementation projects (Mohlala and Tonga) which the Mvula Trust undertook and which later formed the basis for this study are typical - yet in some ways contrasting - examples of the South African rural environment. Both are characterised by a distinct lack of water supply, yet one (Mohlala) lies in a relatively high rainfall and hilly area; the other (Tonga) lies in an area characterised by very flat topography and whose rainfall is relatively low. Institutionally, both regions remain largely similar. Generally, one could conclude that their responses and approaches to the WRM principles are largely similar.

It is interesting to note that once the principles had been translated and explained (which was done with some difficulty) most of the people interviewed were in general agreement as to their importance. It was further clear that though they would not have verbalised the principles in the equivalent language, they were concepts which had been, to lesser or greater degrees, part of their general discourse.

From the point of view the Mvula Trust, each of the eight principles form an important part of their project implementation policies and procedures, though they are not explicitly stated as such. Perhaps it is worth considering in future Mvula undertakings that these principles are actually explicitly stated and subsequently monitored to evaluate the beneficiary community's adherence to them. However, as is the case with all development work, the context remains one in which principles such as these, are goals which can be striven for and which can always be improved upon, but whose perfection will always remain illusive.