

*Domestic Water Provision in the Democratic
South Africa – changes and challenges*

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Introduction

South Africa is a country with marked spatial and temporal variability in the rainfall it receives (O’Keeffe et al, 1992). The natural variability in the rainfall coupled with the high rates of potential evapotranspiration has placed the gathering, storage and reticulation of water high on the planning agenda from colonial times up until the present. With industrialisation, urbanisation and population growth the demand for municipal water services will continue increasing, placing pressure on the ability of the natural systems to provide a sufficient quantity and quality of water, sustainably.

Under the South African apartheid regime, government policies were geared at advancing the needs of the select few. The water policy was no exception. The development of South Africa’s water resources was linked more with supporting the progress of the country’s wealthy sector than with alleviating the position of the poor, particularly in rural areas. The legacy of apartheid left the democratic government elected in 1994 with a situation in which some 12-14m people lacked access to formal water supply and 21m people out of a total population of 41 million had no formal sanitation (DWAF, 1999). Most of these people lived in the former homeland areas, where 75% of the population lived on 13% of mostly water-short land.

Through the riparian access principle, the right of access and use of water resources was intimately linked to the ownership of land. This principle, inherited from English Law, tied water rights to land rights – a person owning land over which water flowed had a right to a share of the “normal flow” (MacKay, 2003). Water became a securitised resource, linked to power and influence in society and used as an instrument of state manipulation. In this securitised environment water resources were provided to black South Africans at a lower standard than what white South Africans received it at. During the political turbulence of the 1980s and 1990s the withholding of payment for basic municipal services, such as water, by black communities became an effective form of

protest (McDonald 2002b). The government carried on providing services in an effort to prevent further destabilisation.

With the dawn of democracy in 1994 the government emphasis shifted toward water services being made available to a greater section of the South African population, in order to improve their standard of living. This desire to achieve universal access to water services in the country has been placed in a politicised environment where environmental sustainability and economic efficiency guide national-level water policy. There has been a shift from developing new water resources and towards the efficient management of current ones through water demand management. Water is recognised as having an economic value and is increasingly being priced at a rate which reflects its value and scarcity. The need to extend water services to all has come into conflict with the cost recovery principle, with the issue compounded by the legacy of the rates boycotts which took place prior to 1994.

This study seeks to describe these contending issues in the context of the normalisation of the general South African political environment in the post-apartheid era. A case study on the impact of pre-payment water meters in the Soweto suburb of Phiri provides an example of the politically charged atmosphere surrounding service delivery in the modern South African context. It is found that for some stakeholders opposition to the introduction of water meters is an issue of principle, while for others it is an issue of process (which was followed in their introduction). While many respondent in the case study are opposed to pre-paid meters it was found that the majority feel that “people should pay for water”. One of the respondents expressed this ambivalence towards the meters eloquently, stating *“I can say yes and I can say no at the same time. Yes because every 1st day of the month 6000 litres of water is free. But I can say no because these meters are quick to finish the water”*.

Water Services in the Pre-democracy Era

Prior to the end of Apartheid in 1994, government policies were geared at advancing the needs of the select few, mostly the white population group. The water policy was no exception. According to DWAF (1994), the development of South Africa's water resources was linked more with supporting the progress of the country's wealthy sector than with alleviating the position of the poor, particularly in rural areas. Water was a tool for stimulating economic development through the agricultural sector, as well as being a necessary input to the mining sector – the mainstay of the South African economy for much of the 20th century. Access to water was dependant on access to land, which was politically controlled. The provision of water services became dependant on political patronage and allegiance to the state. In this context water can be viewed as a *securitised* resource with its allocation and management controlled by the state for the higher purpose of national security, overriding the conventional political processes (Turton and Earle, 2005).

The southern African climate is characterised by variability and change (Ashton & Turton, 2004). This natural state is impacted through the effects of human-induced climate change, with greater aridity likely (Scholes & Biggs, 2004). The average annual rainfall of 495 millimetres per year is well below the 800 millimetres per year considered necessary for rainfed agriculture (FAO Aquastat, 2005). Rainfall and water resources are also unevenly distributed in both space and time. There are few years of average rainfall or river flows, with extremes of drought or floods being the norm. This variability is coupled with one of the lowest conversions of rainfall to runoff in the world (O'Keefe et al, 1992). Typically around 20 to 30 percent of rainfall is converted to runoff (see Figure 1)

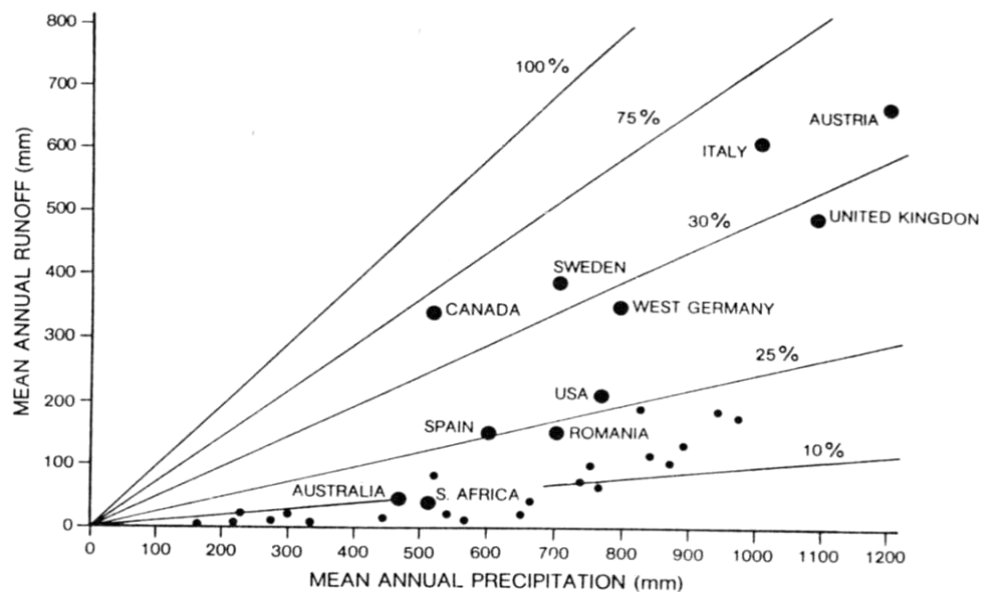


Figure 1: Conversion of rainfall to runoff in South Africa is amongst the lowest in the world (O’Keeffe et al, 1992).

In South Africa only around 10 percent of rainfall is converted to runoff, largely due to the high rates of evaporation experienced in the country. Potential evaporation rates of 2,000 – 3,000 millimetres per year are common in parts of the country – many times higher than the average rainfall. The development of water infrastructure has thus enjoyed a prominent place on the South African planning agenda from colonial times to the present day (Turton et al, 2004).

Water security is the product of two factors – physical water resources and social resources. Physical scarcity of water can be overcome through mobilising high levels of economic and political power and making use of the education and skills of the population. Thus a country which is water scarce is not necessarily water insecure (the converse of course also holds true). Many countries in the world overcome their lack of physical water resources through applying social resources to construct water transfer and storage infrastructure or to apply principles of water demand management (WDM) – see Figure 2.

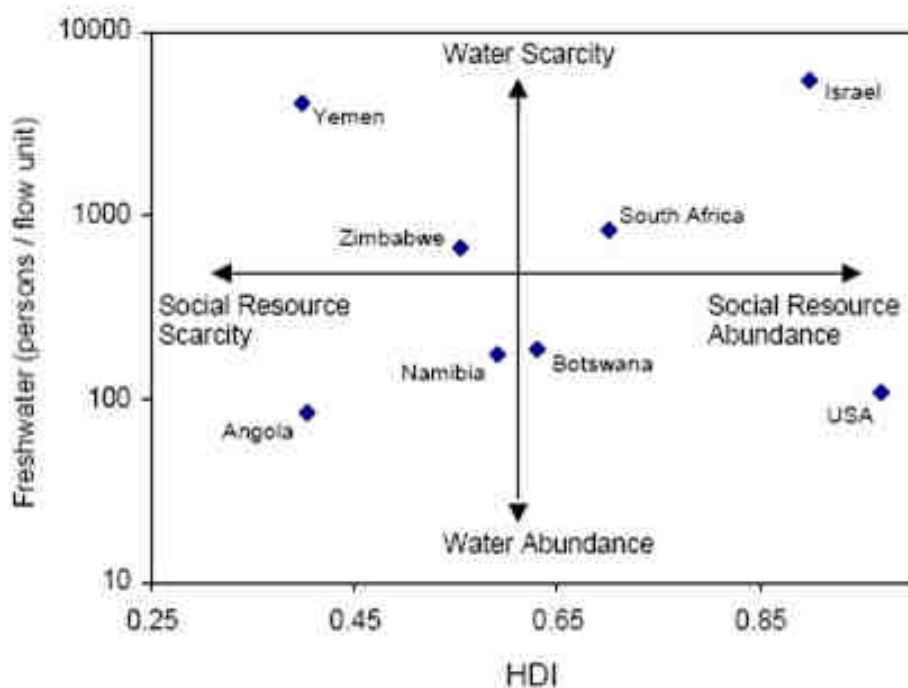


Figure 2: Water security is dependant on physical water availability as well as on social resources, here measured by the UNDP's Human Development Index (Earle & Turton, 2003)

South Africa used its well developed social resources to engineer itself a degree of water security. This involved the construction of large-scale water transfer schemes such as the Orange-Fish Sundays river transfer of the 1950s and the Lesotho Highlands Water Project started in 1986.

The first water legislation to be enacted after the formation of the Union of South Africa in 1910 was the Irrigation and Conservation of Water Act 8 of 1912, the main emphasis of which was irrigation for agricultural development. This paved the way for the rapid agricultural and industrial development which South Africa went through in the 1920's. The growth of the economy was mainly due to the discovery of new diamond fields, the protection of the agricultural industry, and the promotion of local industries (Turton et al, 2004). As a new country it was important that South Africa develop local manufacturing

capacity as well as attaining food security through the promotion of food self reliance, prompting the government to protect the local industrial and agricultural sectors. This increase in local production of agricultural and industrial products, as well as the continued growth of the mining sector all placed more stress on the water resources of the country. Additionally, in the wake of the South African War and the First World War there were large groups of unemployed former soldiers in the cities. They were referred to as “poor whites” and became the direct beneficiaries of several large infrastructure development projects (Turton et al, 2004).

The Great Depression of the 1930s intensified this need for large-scale infrastructure development projects. During the 1930s large-scale water infrastructure projects such as the Vaal Dam south of Johannesburg and the Vaalhartz Government Water Scheme were developed to provide water to industries and farms (DWAF, 2005).

Act 8 of 1912 was the first legal codification of water law in the Union of South Africa and as mentioned above, its main emphasis was irrigation. By the 1950s Act 8 of 1912 “had outlived its usefulness” (Barnard, 1999) with the emphasis on irrigation proving to be inadequate for the new water requirements of an expanding industrial base (DWAF, 1994). This led to the subsequent passing of a new Water Act in 1956 (Act 54 of 1956). According to Gildenhuis (1997:59), this Act also placed a major emphasis on irrigation, although other water uses received greater recognition than in the past. The Act intended to ensure an equitable distribution of water for industrial and other competing users, as well as authorise strict control over the abstraction, use, supply, distribution and pollution of water, artificial atmospheric precipitation and the treatment and discharge of effluent (DWAF, 1994:04). This reflected the change in the South African economic structure over time. In the period prior to the Second World War the economy was still primarily an agriculture-mining based one. After the war this shifted to becoming a more sophisticated economy, based on agriculture-mining-manufacturing. Thus the 1956 Act attempted to allocate water between these competing consumers.

Of particular importance, the 1956 Act made an ambiguous distinction between public and private water and streams, with private water being water which naturally rises, falls, drains or is led onto land but which is not capable of common use for irrigation purposes and public water being a natural stream of water which flows in a known and defined channel, if such water can be used for irrigation on two or more pieces of riparian land (O’Keeffe, Uys and Bruton, 1992:295). Gildenhuis (1997) also states that the 1956 Water Act made it possible for the Minister of Water Affairs, through the declaration of Government Water Control Areas, to obtain wide powers of administrative control over major water resources.

According to Barnard (1999:262) a major principle of the 1956 Act was that ownership of riparian properties conferred water rights, with the sole and exclusive use and enjoyment of private water belonging to the person on whose land it rose and fell. This meant that owners of riparian land could take as much surplus water as they could use beneficially and if they could afford it, they could impound all the surface water (MacKay, 2003). This method of water allocation, called the riparian principle, afforded unfair privileges to a small category of persons, mostly white, to control the country’s water resources.

The impact of the riparian principle of water rights needs to be viewed in the context of the shift in the ownership of land which was taking place in South Africa over that time. The first attempted implementation of segregation after the establishment of the Union and regarding rural areas, which had been alienated into farms for white owners, was the Natives 47 Land Act of 1913. This Act established a clear distinction between African Reserves and white farming areas. Under the Act, no land could be shifted from one category to the other. This meant that blacks were no longer allowed to purchase land within white areas. Through a series of other land related pieces of legislation 87 percent of the country’s land was set aside for whites (Turton et al, 2004).

Water services provision to the black populated areas was inferior to that enjoyed by the white communities (MacKay, 2003). However – most municipalities and townships did

offer some sort of basic level of services to residents. Water was typically provided through a standpipe in a community. Those houses which did have in-yard or in-house connections usually paid a flat monthly rate for the service they received. As the political situation of the country continued to destabilise a process of “civil disobedience” was adopted by the black majority. This involved withholding payment for municipal services such as water and electricity and was collectively referred to as a “culture of non-payment”. The government turned a blind eye to the lack of payment and generally carried on providing the basic services in an effort to prevent political tensions from escalating further.

Water had, in effect, become a securitised resource, placing its management outside of the realm of political interaction. Politicisation means to make an issue appear to be open, a matter of choice, something that is decided upon and that therefore entails responsibility, in contrast to issues that either could not be different (laws of nature) or should not be put under political control (Buzan et al 1998). By contrast, securitisation is a speech act legitimising extreme measures by calling on existential threats, as 'so important that it should not be exposed to the normal haggling of politics' (Buzan et al 1998). Through the securitisation of the debate around water resources successive pre-1994 South African governments were able to place the bulk of the country's water resources under the control of a minority of the population.

Post 1994 Transition to Democracy

By the late 1980s the political situation was becoming unsustainable for the government – the war in Angola was draining resources and proving impossible to win and the townships locally were becoming more unstable by the day. In this volatile situation change, when it finally came, happened fast. The story from the initial un-banning of political organisations by the National Party government under FW de Klerk in February 1990, leading to the release of political prisoners and culminating in the first democratic elections held in April 1994 is well known. Behind the scenes a lot had to happen to

make the experience of democracy a reality for the mass of the South African citizens expecting change. The provision of water supply and sanitation to all citizens based on the principles of equity and sustainability were placed near the top of the political agenda (MacKay, 2003).

The 1956 Water Act, based as it was on providing water for the economic growth of South Africa without specific regard for the environment or social equity issues would need to be replaced. An extensive public participation process was embarked on by the Department of Water Affairs and Forestry (DWAF), resulting in the Water Law Principles being approved by Cabinet in 1996 (MacKay, 2003). The most significant of these from a socio-economic and political point of view were:

- Principles 3 & 4, leading to the abolition of water rights and the private ownership of water,
- Principle 7 establishing “environmentally sustainable social and economic benefit” as a key criterion for water resources management and allocation decisions,
- Principle 16 providing for the use of economic instruments in the management and control of pollution; and
- Principle 24 stating that the beneficiaries of a water management system should contribute to the cost of its establishment and maintenance (MacKay, 2003).

These Principles are largely in accordance with the Dublin Principles on Water Management:

- Principle No. 1 - Fresh water is a finite and vulnerable resource, essential to sustain life, development and the environment
- Principle No. 2 - Water development and management should be based on a participatory approach, involving users, planners and policy-makers at all levels
- Principle No. 3 - Women play a central part in the provision, management and safeguarding of water
- Principle No. 4 - Water has an economic value in all its competing uses and should be recognized as an economic good

Both sets of principles were summed up by the succinct slogan adopted by the DWAF in the post 1994 years – “Some for all for ever” embodying the equity as well as the sustainability components of the principles.

Prior to 1994 access to water was dependant on access to land and the management and allocation of the resource was highly securitised. Water was supplied to those with political and economic power or in return for political patronage. In effect citizens are viewed as *patrons* of the state. In the Post 1994 era the only right to water is the Reserve – the basic human subsistence amount and the needs of the environment (NWA, 1998). Water management is based on the *subsidiarity* principle – management takes place at the lowest practical level in a politicised environment. Citizens are, increasingly, viewed as *consumers*, with rights as well as obligations.

Based on the Water Law Principles the Water Services Act (Act 108 of 1997) and the National Water Act (Act 36 of 1998) were drawn up and adopted.

The National Water Act of 1998 repealed the 1956 Water Act and all related legislation. Of great importance this Act placed “virtually all water” under the trusteeship of the national government. Section 3 (1) of the Act reads, “As the public trustee of the nation’s water resources the National Government, acting through the Minister, must ensure that it is protected, used, developed, conserved, managed and controlled in a sustainable and equitable manner, for the benefit of all persons and in accordance with its constitutional mandate” (RSA, 1994).

The National Water Act 1998 dedicates a chapter (chapter 4) to the use of water (NWA, 1998). It clearly stipulates that the National Government has the overall responsibility for and authority over water resources management, including the equitable allocation and beneficial use of water in the public interest. Based on this argument, all uses of water became subject to recognition as “permissible” under the Act. There are to be no “rights” to water – only authorisations (except for the Reserve – the basic human consumption amount and ecological requirements).

Three types of water use authorisations can be granted:

1. Schedule 1: These are non-commercial uses of water including domestic use, small-scale gardening & the watering of livestock. Such a use will not attract any charges or tariffs for the water and the water will be supplied to water service providers free of charge.
2. A general authorisation can be granted to groups of users – such as farmers who have had land returned to them.
3. A water use license must be applied for when water will be used for large-scale or commercial purposes.

The Water Services Act of 1997 (No. 108 of 1997), Section 3(1) states “everyone has a right of access to basic water supply and basic sanitation”. According to De Visser, Cottle and Mettler (2003:34) “basic water supply” is the “prescribed minimum standard of water supply services necessary for the reliable supply of a sufficient quantity and quality of water to households, including informal households, to support life and personal hygiene”. The 1997 Act sets out the rights and duties of consumers and places emphasis on ensuring the financial viability of water service providers. The concept of “cost recovery” (of providing water) and private sector involvement in the provision of water is entrenched (WSA, 1997).

Three common themes can be seen emerging from the above principles and acts:

- First – there is an element of equity – in compensation for the past differences between communities in service access. This encompasses the social component of water use – where water is an instrument of social development.
- Second – the element of sustainability is introduced, recognising the environmental need for water (as well as that of downstream users including neighbouring states).
- Third – elements of economic efficiency, cost recovery, user-pays and private sector involvement are introduced. Water is seen as an economic good, to be used

in the most efficient setting possible to promote the overall economic development of the country.

These three forces are set in competition with each other, with each vying with the others for legitimisation (see Figure 3). The *social*, *environmental* and *economic* sectors have different needs – some of which overlap, but others are, potentially, in opposition with each other. Their zone of interaction is the political debate prevalent in a democracy such as modern South Africa. Allocation of the shares of a finite pie imply that there will need to be compromises reached between the various sectors and that not all needs can be met. At times alliances between the groups may form – such as between environmental groups and community based groups in the form of action campaigns, pressure groups, civil society organisations or political parties.

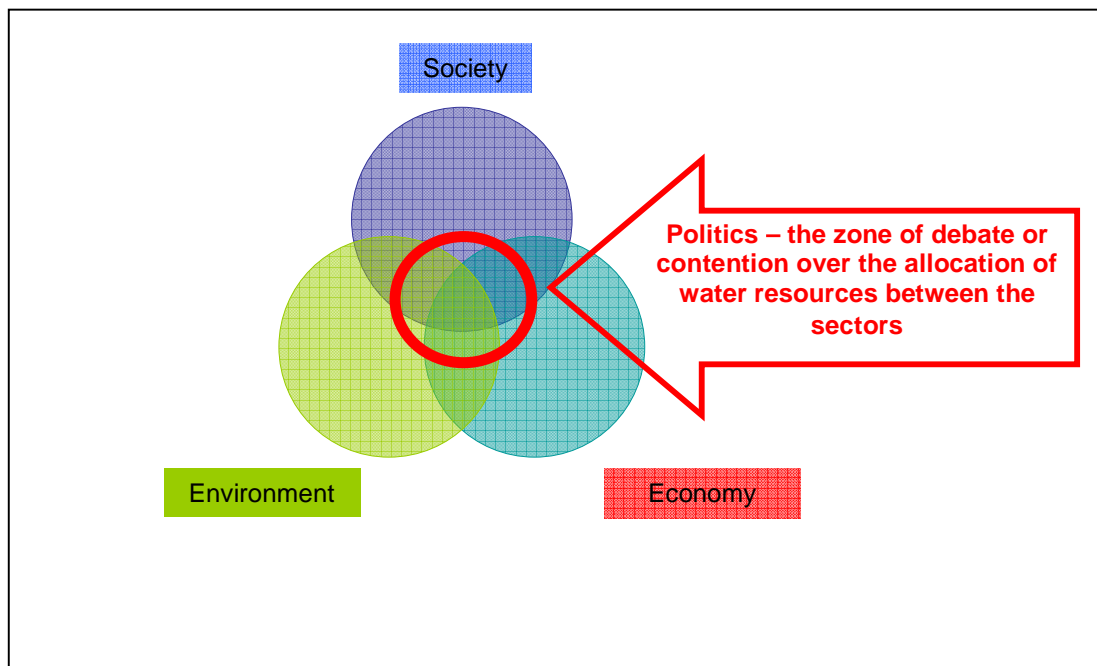


Figure 3: Different sectors compete for water resources

The “Reserve” as defined in the 1998 National Water Act seeks to provide a basic minimum amount of water to the environment and to society for basic use. It is this right to water of society and the environment which comes up against the view of water as an

economic good over which there is a high level of political debate – both within South Africa as well as internationally.

In 1996 the government adopted the most important law on which all other legislation rests, Act 108 of 1996, the constitution of the Republic of South Africa. Chapter 2 of the constitution contains the Bill of Rights, “a cornerstone of democracy” that “enshrines the rights of all people... and affirms the democratic values of human dignity, equality and freedom”. Perhaps for the purposes of water, section 27 of the constitution plays a vital role because it affords everyone the right to have access to among others, sufficient food and water and puts responsibility upon the state to take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of each of these rights (RSA, 1996).

According to DWAF (1994:03) the fundamental issue to be addressed by the new government in the water sector was/is that of equity, arguing that “the line which divides those with adequate access to water from those without is the same dividing the rich from the poor, the hungry from the well fed, the line of race and privilege”. The new government proclaimed that its goal was thus to ensure that all South Africans have access to essential basic water supply and sanitation services at a cost which is affordable both to the household and to the country as a whole.

Since under the previous system water ownership was tied to ownership of land, the majority of South Africans were “condemned to a life of poverty, insecurity and contentious exposure to diseases that would otherwise be avoidable” (De Visser, Cottle and Mettler 2003:27). By the time the new government came into power, the majority of South Africans were hoping for at the minimum, access to basic water supply. De Visser, Cottle and Mettler (2003:27) argue that at nationwide public hearings on poverty in 1998, the restriction to access to water was continuously cited as one of the many obstacles in the development of many impoverished communities. The ANC’s first major policy paper-the Reconstruction and Development Programme (RDP) of 1994 promised to deliver the basic services (meaning water supply and sanitation) to those without them.

The 1994 White Paper on Water Supply and Sanitation Policy (1994:06) states “the development approach which guides the policy proposed for water supply and sanitation is derived directly from the principles which underpin the Reconstruction and Development Programme, it is also informed by substantial, sobering, international experience gained during and after the international Drinking Water and Sanitation Decade of the 1980s ”. The 1994 Reconstruction and Development Programme provided for a short-term target of a safe water supply of 20-30 litres per capita per day within 200 meters, an adequate/safe sanitation facility per site, and a refuse removal system to all urban households (De Visser, Cottle and Mettler, 2003:35).

The human right to water & cost recovery

There is enough literature documenting the statistics of the world population without access to the basic of services. In South Africa, some 12 million people were reported to be without adequate water and 20 million people without adequate sanitation services at the dawn of democracy (DWAF, 2002:01). Gleick (2000) argues that access to a basic water requirement is a fundamental human right implicitly supported by international law, declaration, and state practice. Gleick (2000) argues that this right could also be considered more basic and vital than some of the more explicit human rights already acknowledged by the international community.

In the South African context, basic water supply is defined as 25 litres per person per day, considered to be the minimum for direct consumption, for the preparation of food and for personal hygiene. According to De Visser, Cottle and Mettler (2003:32) the phrase “right of access” means the duty is placed on the state to provide the beneficiary with an opening to the right, arguing that the right is not automatically or immediately enforceable, and that the beneficiary is also under an obligation to use his or her own resources to fulfil this right. The 1997 White Paper on a National Water Policy for South Africa (1997:08) states that government is instructed to take reasonable legislative and other measures within its available resources to achieve the progressive realisation of these rights. Obligations are placed on all three spheres of government- National,

Provincial and Local to promote the right of access to basic water services. The state must ensure that all people have *physical* access to water. This means that the facilities that give access to water must be within safe physical reach for all sections of the population, especially for vulnerable and marginalised groups. The state must also ensure that all people have *economic* access to water. This implies that the cost of accessing water should be pegged at a level that would ensure that all people are able to gain access to water without having to forgo access to other basic needs.

The 1994 Water Supply and Sanitation Policy White Paper produced by the DWAF introduced the concept of focussing the DWAF resources on the capital costs of extending the basic water services infrastructure, while covering operation and maintenance costs from user charges (Marah et al, 2004). The white paper states that “the basic policy of Government is that services should be self financing at a local and regional level”. In this way the DWAF sought to focus its limited resources on capital development, with operation and maintenance costs covered by users at the local level. However, by the late 1990’s it merged that lack of payment for water services was impacting on the expansion of basic water services. In 1998 it was admitted by the DWAF that “many of the Department’s RDP water projects are proving unsustainable as cost recovery is not taking place” (Marah et al, 2004). The reasons given for this low level of cost recovery ranged from the communities being too poor to pay, to people being used to receiving the service for free previously to a lack of legitimacy of local government.

These background factors set an important context in which any cost recovery process needs to take place. Marah et al (2004) in their study on water scheme cost recovery propose four background factors which influence the success or otherwise of cost recovery initiatives:

- *Social Capital* – the presence in a community of a sense of interdependence and its ability to collectively solve problems. Trust, financial resources, education levels and governance all play a role in determining the success of water supply projects in communities. Social capital can be developed, as has been done through the Mvula

Trust in generating support and trust within communities around specific water supply projects. An important part of social capital is respect for leadership – there needs to be a sense of legitimacy about the people tasked with managing a scheme.

- *Previous Cost-Recovery Regime* – the nature of the cost recovery regime and the efficacy with which it was enforced had a profound effect on the way in which changes were accepted (Marah et al, 2004). There is also a direct correlation between the length of time between the initial supply of water from a scheme and cost recovery measures being introduced and the unwillingness of people to pay for water. However, the existence of a weak or ineffective system does not preclude a reversal in payment practices – there are several examples of successful turnarounds.
- *Previous Levels of Payment* – if people are not used to budgeting for water it is difficult to introduce the concept of cost recovery. Changing the behaviour of people is difficult, but not impossible. An example of a community in Klerksdorp with a “culture of non-payment” (for services) developed during the end years of apartheid through the rates boycotts shifted from 11% payment levels to around 94% shows that it can be done. Elements needed are improved service, customer education and strict enforcement.
- *Previous Standard of Service* – the level of satisfaction with the water provision system in place has an impact on people’s willingness to pay for an improved service. There are several examples of old systems still being used even after new ones are introduced. Although the old system may be less convenient (requiring a long walk, or hand pumping etc) people may continue using it as it is free. In the case of people fetching water from rivers this poses a possible health risk, exposing them to a range of waterborne diseases.

According to McDonald (2002b) cost recovery has not always been the *modus operandi* of the South African government arguing that during apartheid, many South Africans received subsidized services and infrastructure, even though these benefited the rich white suburbanites the most. He writes that there were user fees, tariffs and general property rates for services, but the most part of these charges had little relevance to the actual marginal costs of providing them, stating that this was due partly to the to the fact

that it was virtually impossible to estimate the costs of a given municipal service because apartheid local governments were so fragmented, but more importantly, there was little interest on the part of the apartheid state to pursue full cost recovery.

Water pricing, in the form of progressive block tariffs was introduced in South Africa as a cost recovery measure. The 2002 Draft White Paper on Water Services states that charging for water is essential in order to generate funds for operating, maintaining and investing in water systems. Block tariffs are geared at making the initial levels of consumption more affordable-or even free- while charging increasingly higher prices as consumption levels rise, increasing the potential benefit of curbing consumption at the top end, thereby introducing conservation incentives (McDonald, 2002a).

The key features of the 2002 Draft White Paper on Water Services are:

- Everyone is entitled to a basic supply of 25 litres of clean water per day, or 6 000 litres per household per month
- No one should be without a water supply for more than seven days per year if a public supply is interrupted for more than 24 hours, the municipality should liaise with residents and arrange for emergency supplies
- Local Government (municipalities) is responsible for the provision of water supply services
- People who cannot afford to pay for water are still entitled to a free basic water supply
- It is a criminal offence to connect to a public water supply without municipal permission
- People who are unable to pay their water bill should make arrangements with their municipality
- Municipalities may restrict people to the free basic amount, but may not withhold the basic supply
- Municipalities must inform people before they discontinue their services and must also have a consumer service where people can lodge complaints.

The South African Constitution allows national government (DWAF) to decentralise its power and attendant responsibilities. In this way local government can assume the responsibility for the provision of water services and can contract with private companies to manage and provide water services. However – the national government “bears the ultimate responsibility to ensure compliance with the state’s obligations” – as contained in the Bill of Rights (Welch, 2005). The Constitution recognises international law in the interpretation of the Bill of Rights. South Africa is a party to the International Covenant on Economic, Social and Cultural Rights of the United Nations which specifies that states must provide “sufficient, safe, acceptable, physically accessible and affordable water” to their citizens (Welch, 2005). Thus, where water management services are provided with private sector involvement, the government “is in violation of its duty to fulfil its obligation to citizens if it allows private water companies to arbitrarily disconnect water taps or to adopt discriminatory or unaffordable increases in the price of water” (Welch, 2005).

Free basic water

In an effort to remove the economic inaccessibility of water for all, President Thabo Mbeki in 2000 announced a policy to provide free basic water – providing a bridge between the need for equity and redress and the goal of economic efficiency. Free Basic Water (FBW) is funded using a combination of the equitable share of local government revenue and internal cross-subsidies from appropriately structured water tariffs (De Visser, Cottle and Mettler, 2003:37). According to the Draft White Paper on Water Services (DWAF, 2002) the right to basic water services is not an absolute right, but subject to the state taking reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of these rights. The White Paper also states that this right is subject to specific obligations such as the payment for services (over and above the basic amount) and the limitation and disconnection of the service in certain circumstances. It is also specifically stated that the basic water amount cannot be withheld due to non-payment of past accounts in accordance with the international provisions referred to above.

The Draft White Paper referred to above however states that in terms of the free basic water policy, the provision of the first 6 kilolitres consumed by a household per month is free of charge. It also states that the cost associated with providing fee basic water services to poor households is not large for a country of South Africa's economic size and strength with the total cost estimated to be some R1.5 billion per annum, which is equivalent to 0.15% of GDP. This policy was particularly meant to benefit those who need it the most, households in remote rural areas, especially those served by small local systems (DWAF, 2002:34).

The free basic water policy has been the centre of some controversy, with analysts like David McDonald (2002a) arguing that the promise of 6 kilolitres of water per household per month offers little respite as many low-income households use considerably more than 6 kilolitres due to relatively high average numbers of occupants per household and also because of old and leaky apartheid-era infrastructure. The 6 kilolitre provision is an extrapolation of the basic amount of 25 litres per person per day. This is just above the amount considered by the World Health Organisation (WHO) to be "basic access" see Table 1). It should be noted however that this level of access from a communal standpipe less than one kilometre from the home is considered by the WHO to pose a "High" level of health concern (Howard & Bartram, 2003). Thus 25 litres per person a day is the minimum, while 50 litres a day per person with an in-yard connection should at least be aimed for. Considering that the majority of South African households have between eight and ten member the 6 kilolitres a month is in some cases far from adequate. In addition, the rapid tariff increases after this free block can mean that poor families end up paying more, not less, for water than they did under old tariff structures (McDonald, 2002a).

Table 1 Summary of requirement for water service level to promote health

Service level	Access measure	Needs met	Level of health concern
No access (quantity collected often below 5 l/c/d)	More than 1000m or 30 minutes total collection time	Consumption – cannot be assured Hygiene – not possible (unless practised at source)	Very high
Basic access (average quantity unlikely to exceed 20 l/c/d)	Between 100 and 1000m or 5 to 30 minutes total collection time	Consumption – should be assured Hygiene – hand-washing and basic food hygiene possible; laundry/ bathing difficult to assure unless carried out at source	High
Intermediate access (average quantity about 50 l/c/d)	Water delivered through one tap on plot (or within 100m or 5 minutes total collection time)	Consumption – assured Hygiene – all basic personal and food hygiene assured; laundry and bathing should also be assured	Low
Optimal access (average quantity 100 l/c/d and above)	Water supplied through multiple taps continuously	Consumption – all needs met Hygiene – all needs should be met	Very low

According to the Draft White Paper on Water Services the responsibility of delivering services rests with the local government – in line with the Constitutional provision to do so (DWAf 2002). De Visser, Cottle and Mettler (2003:29) note that the role of local government is, however, performed in partnership with the other spheres of government. Section 154 (1) of the Constitution directs the national and provincial governments to support and strengthen the capacity of municipalities to perform their functions. The service delivery functions of the local government were regulated through the Municipal Systems Act. DWAf (2002:03) reports that after the 2000 local government elections, local government would assume full responsibility for water and sanitation services as provided for in the Constitution. The Municipal Systems Act instructs municipalities to among others ensure a reflection of the principles of a municipality's tariff policy in executing all its duties of service provision. Among these, the element of cost recovery is stressed (De Visser, Cottle and Mettler, 2003). These state that section 74(2)(b) stipulates that the amount individual users pay should generally be in proportion to their use, with section 74(2)(d) stating that tariffs must reflect the costs associated with rendering the service and 74(2)(e) establishing financial sustainability as a principle for tariff policy.

The introduction of cost recovery measures has stirred a lot of unhappiness among the previously disadvantaged communities. According to McDonald (2002b) it means services that used to be provided for free or at a highly subsidized price are now charged according to the full (or near full) costs of delivering them.

McDonald (2002a) does not suggest that cost recovery should not be implemented, he posits that the problem with cost recovery in South Africa is that it has been counter-productive to the goals of equity and environmental sustainability and threatens to undermine post-apartheid reconstruction and development efforts in the country. De Visser, Cottle and Mettler, (2003:40) also argue that it is not unreasonable to expect beneficiaries to pay for water and sanitation services provided to them, but that problems such as high unemployment and dependency on seasonal income sharply influence the 'reasonableness' of the user pays principle. In a country such as South Africa with a large portion of the population living in poverty there needs to be subsidisation of the provision of water services – the market alone will not ensure equitable access to water services.

According to the DWAF there are three main ways to approach the subsidies needed to provide FBW:

- *Rising block tariffs* are an effective approach to subsidies. For example, if the rates for the first block up to 6 000 litres per month is set at R0/kl then all consumers who keep their consumption below this level get the service at zero tariff. This approach could be described as a 'free basic water for all' policy as every domestic consumer gets the first block at a zero tariff. The system only works if there are sufficient high income consumers in the highest tariff block using relatively large amounts of water and paying more than the cost of supply. These higher tariffs pay for the 6 000 litres free (and for the 6 000 litres to the poor). This system requires that consumers using less than 6 000 litres do not pay a basic fixed charge. An additional advantage of this system is that it can be used to support water conservation.
- *Credits to the poor*: If it is possible to identify the poor, they can be allocated a credit on their water accounts to cover the price of purchasing the first 6 000 litres per month.

Identifying who is poor is sometimes difficult and costly. However, many local authorities in South Africa have done it effectively and the process can be used to target subsidies on other services as well. There are ways of applying ‘credits’ in situations where consumers are not billed. For examples, vouchers or coupons can be issued or prepayment systems can be set up to provide water at a zero tariff.

· *Targeting through service level:* It is possible to provide water free only through a particular type of service that restricts supply to basic levels. This can be arranged so that everyone is offered the basic service level supply, and only those who show that they can afford it get higher service levels -- typically a metered supply. In other words the poorer households will ‘self-target’ by only upgrading when they can afford to.

While going some way to reconciling the need for equity and redress and the need for economic efficiency there are still problems being encountered in ensuring sustainable access to water supply country wide. The three methods of providing FBW mentioned above have their limitations. The most common method used – that of rising block tariffs – only works in municipalities with a large enough number of high volume users to make cross subsidisation feasible. In many areas, such as those predominantly comprised of townships or in rural parts of the country there simply are not enough high volume users of water to make the approach effective. In addition the problem of non-payment can lead to low levels of cost recovery in some areas. The use of targeted credits has now become possible through the provision of the equitable share grant from the national treasury to the municipalities. However – many municipalities lack the human resources to implement the scheme, creating backlogs. Service level targeting runs the risk of relegating the poor to an inferior service level. Whatever approach is adopted the success of the FBW scheme is reliant on the implementation of effective metering, monitoring, leakage detection and control, billing and credit control. All of these presume a high degree of capacity within municipalities – capacity which is frequently lacking.

Private Sector Involvement in Water Services Provision

In an effort to fulfil their constitutional mandate of providing water services to the population while treating water as a scarce resource many municipalities and their water service providers have entered into partnerships with private companies. For instance, the City of Johannesburg formed the Johannesburg Water Company (JOWCO). While still maintaining formal public ownership of JOWCO, the Johannesburg City Council outsourced the day-to-day management and running of JOWCO to French water multinational, Suez through its Johannesburg Water Management (JOWAM) company. JOWAM has attracted much criticism for the introduction of its Operation Gcin'amanzi ('conserve water'). According to JOWAM the objective of the Operation Gcin'amanzi' is to "substantially reduce water wastage both on private properties and within the municipal water network. This will lead to savings of up to R158 million a year to the city of Johannesburg as well as a drastically reduced water and sanitation bill to individual households. "Ordinary consumers will, in future, pay less than a third of what they are currently billed for each month," says the Managing Director of Johannesburg Water, Mr Greg Segoneco" (JOWAM, 2004). Much of the apartheid-era infrastructure in the poorer areas of the city, such as Soweto, is in need of replacing. According to some estimates over 70% of all water entering the township is lost to leaks – either underground or in people's homes and businesses. As the City of Johannesburg has to pay bulk water supplier Rand Water for the water it supplies to the city there is a strong incentive to bring down wastage and leakage losses. The operation involves replacing leaking infrastructure, by JOWAM at their cost, and installing pre-paid water meters in households.

The introduction of these water meters has led to much controversy and criticism, as they automatically shut-off the supply of water after the initial 6,000 litres per month has been delivered, unless a payment is made. Organisations such as the Anti Privatisation Forum (APF), Soweto Electricity Crisis Committee (SECC) and the Orange Farm Water Crisis Committee (OFWCC) claim that the introduction of the meters and their ability to cut-off the water supply at will infringe on the provision under the South African Constitutions' Bill of Rights that "everyone has the right to have access to sufficient water". This, they claim, has led to a form of neo-apartheid – separating those who can afford to pay for

water services from those who can't. Richer households, who usually have fewer members, thus receive a proportionally greater benefit under the FBW system than the poorest do – exactly the reverse of what is intended. Most poorer households simply cannot afford to pay for the extra water they consume – the result being that many start using other sources of water such as wells and rivers. In 2001 this led to a well publicised case in Kwa-Zulu Natal where residents of Ngwelezane had their water cut-off by the Umgeni Water board for non payment of accounts. Over 200 residents died after contracting Cholera from a nearby polluted river.

The APF and partners are in the process of challenging JOWCO through the court system, as well as launching a campaign of mass action - Operation Vulamanzi ('water for all'). This action has included the destruction and bypassing of water meters and other water infrastructure as well as protests at the offices of JOWAM and the Johannesburg City Council. Several protestors have been arrested and, according to the APF, handed inordinately heavy fines and had their right to freedom of expression and dissent curtailed. In effect the APF fear a re-securitisation of water resources, where their management is not open to political debate.

The opposition to the installation of the pre-paid water meter system from the APF has started attracting attention locally and internationally. What is emerging is that there are a complex set of interconnected issues, many not related to water, which are impacting on and driving the debate. It is thus instructive to look at the situation on the ground in more detail. As part of this overview an empirical study was conducted in two areas which have been test sites for the introduction of these meters (see Appendix 1 for a complete report on the study). Fieldwork was conducted in Phiri and in Extension Four of Orange Farm during the early weeks of November 2004. The quantitative field component involved the administration of 50 standardised questionnaires to respondents in the two communities, a total of 100 questionnaires in all. A qualitative field component involving face-to-face semi-structured interviews with key stakeholders in both communities, provided an in-depth understanding of the attitudes of residents to pre-paid meters. Additionally interviews were held with members of the APF as well as with senior

managers at Johannesburg Water and JOWAM. A range of views and issues are presented in Table 2.

Table 2: Range of views expressed by the various actors (not necessarily in direct response to each other)

Issue	Johannesburg Water	Community members	APF (and affiliates)
Process	People in Orange Farm are ignorant. There are brochures all over the place and everyone should have a clear picture of how prepaid meters work.	There was not sufficient involvement of the community in the implementation of the programme	Only the “usual suspects” were consulted
Process	Every household with a meter gets 6000 litres free & the meter is installed free	Sometimes the meter breaks – then we have no water. We are charged for installing the meter	There is a charge of R600 to install the meter.
Process	Why does the community complain to outsiders and not contact us instead		JHB Water does not want to enter into discussions
Process	It is at the early stage but communities & other actors are making it difficult	It (the Gcin'amanzi project) suits politicians, not us	The process is being pushed by neo-liberal economic policy
Process	People choose to get the meters installed – no one pushes them to do so.	We found the letters sent to us to be threatening in tone (see Appendix 2 for a copy of the letter)	People are not given a choice
Principle	Those who do install meters usually land up paying substantially less for their water than before	We cannot afford to pay what they ask	Economic exclusion creates a new apartheid
Principle	The purpose of installing meters is not primarily for the revenue generated, but rather to cut the cost of bulk water which JHB Water has to pay Rand Water	I do not think it is right to have to pay for water	Water is a human right – not an economic commodity
Process	The bidding process is fair and transparent with an emphasis on using local contractors	There is a lack of transparency in the allocation of contracts – with possible nepotism/corruption suspected	
Process & Principle	6000 litres is the amount decided on by the City of Johannesburg – we have no control over that. We can supply more but would then need more cross subsidisation	6000 litres a month is not enough	6000 litres a month is not nearly enough for a healthy productive life – see WHO

As can be seen from Table 2 most of the issues are around the process followed, rather than the principle behind the action. The points related to specific principles are about the general concept of paying for water, about the inability of people to pay due to poverty and the quantity of 6000 litres a month being too low (although this last point could be considered an issue of process). The issues of process are easier to solve. Johannesburg Water & JOWAM indicated that they would continually seek to improve their stakeholder participation process as well as the technical functioning of their meters. This last point includes the ease with which consumers can buy the tokens needed for recharging the meters. JOWAM also reiterates that for the trial phases (that taking place in Phiri and Orange Farm) there has been no charge for the installation of the meter and the fixing of leaks on the property. However this would be charged for in the future as the scheme spread to other areas. The aim of installing the meters is not for the revenue collected – this is minimal. Rather, it is to improve the transmission infrastructure and bring down overall water use (by eliminating leaks & dropping the quantity of water used), so that less water has to be bought from Rand Water. The payment which JOWAM receives from the City of Johannesburg is tied to its ability to meet targets in reducing these bulk water costs.

Johannesburg Water and JOWAM believe they did all they could to involve stakeholders in the process (see Appendix 3 for a brief overview of the stakeholder participation process followed in Soweto – as supplied by JHB Water). When asked whether they would have approached things differently if they had to do it over again the answer was “no, as it would not have made a difference”.

Overall the opinion of Johannesburg Water & JOWAM management is that the conflict over the installation of the meters boils down to two fundamentally different world views – one where people should receive genuine total free access to water and other services and another which involves some level of cost recovery and the ability for private companies to turn a profit.

The community members who responded to the questionnaire or who were interviewed provided a range of responses, most of which had to do with the process of the installation of the meters. Fundamentally, a majority of respondents felt that water should be paid for. However there was a marked geographic difference, with 87% of Phiri respondents agreeing that water has to be paid for, but only 45% of Orange Farm respondent believing the same. This could be due to the lower level of poverty in Phiri – more of the respondents were employed & also tended to be better educated and live in permanent houses, not shacks. The respondents also had a good knowledge of the FBW policy, most of them knowing that the free amount is 6,000 litres per household a month. When asked if the FBW policy meant that everyone could have as much free water as they want 89% of Phiri respondent answered “no”, with the corresponding figure for Orange Farm being 70%. Thus it would appear that people’s complaints about FBW are not primarily about the principle, but more about the process used to implement it.

Appendix 2 contains a letter sent by Johannesburg Water to residents who had not yet opted to have the pre paid water meter installed. In it they are in danger of being left without water, should they not sign to opt for one of the two options presented. The options are to have a pre-paid meter installed which would bring water into their house or to have a yard standpipe which is un-metered. As the yard standpipe is the level of service that most respondents have been living with the last option is not that unfavourable, especially as it would be free. However people took offence at the tone of the letter, feeling it was threatening them. Generally the issue of water being cut off is an emotive one – eliciting strong reaction from respondents. Many people who believe that water should be paid for (above the 6,000 litres) also believe that water should not be cut-off in the case of non payment. In the case of Phiri 46% of respondent believe water should be cut-off if bills are not paid, while in Orange Farm only 29% agree. This represents an issue of principle – is it acceptable for a person to be cut-off from receiving more water if they are in arrears with their account? South African courts have ruled that no person can be denied the basic 6000 monthly litres – irrespective of the state of their account. The pre-paid meters are designed to “clock-over” to a new 6000 litres at the start of every month – whether there is money in them or not. Whether a person or household

who uses their monthly allocation of free water before the end of the month and can't afford to buy more water should have to live without water for the remainder of that month is a question our society will have to grapple with. According to the provisions of international law as well as the South African Constitution, consideration has to be taken of the availability of the resource (Welch, 2005). If resources are precious and limited, it can be argued that the state is justified in "rationing" their use. The question then is whether market instruments should be used for that or rather another method, such as water restrictions. Considering that domestic water use accounts for around 12% of the total water use of the country and that only a tenth of that is used by the poorer sectors of the population (i.e. 1.2% of total national water use) it should be possible to arrive at a compromise solution (Welch, 2005). Many of the respondents in the case study proposed that an amount of 10,000 litres per household per month would be more acceptable. At just over 40 litres per person a day in a household of 40, this comes much closer to the WHO recommended standard of 50 litres. If this increase is offered only to the poorest households, overall domestic water use is not likely to increase by much. Other domestic uses – such as the irrigation of gardens, filling of swimming pools and the washing of cars – can be cut back on to produce great water savings. Agriculture uses over 60% of the nation's water resources, so a small drop in the water used by each farmer would easily cover the increased water use by the poorer sectors of the population. It could be argued that this increase should be granted under the Constitution as it does not negatively impact on the overall water resources of the country. What would be needed is to either fund the extra amount from an increase in cross-subsidisation from rich communities to poor ones or to increase the grants from the national treasury to cover the shortfall.

Conclusion

The uneasy relationship between the need for equity and the need for economic efficiency is encapsulated in the confrontation between Operation Vulamanzi and Operation Gcin'amanzi. Water and its provision has become a pawn in the battleground between goals of social equity and the interests of big business – at best of times an uneasy relationship. The challenge for the South African Government is to manage the

balance between these two forces – not just in the field of water but in all aspects of social development – housing, education, welfare, healthcare and employment. Government has responded by increasing the money channelled to local government through the Municipal Infrastructure Grant and the equitable share allocation. This should go some way to providing water services to those in poorer communities allowing them to enjoy their right to a basic amount of water. However – capacity constraints in the municipalities could delay implementation. For people to be able to sustainably access more water than the small amount under the FBW scheme they will need to become part of the economic development of the country. The localised “water wars” between the haves and the have-nots are likely to intensify unless broad based economic development becomes a reality for all. Until that time it is likely that any water management strategy is likely to be contentious and, to some degree, ineffective – the Constitutionally guaranteed right to water being but a paper promise. This potential conflict until broad-based economic development takes place could be mitigated by an increase in the FBW quantity – to perhaps 10,000 litres a month for the poor. The small impact it would have on the country’s available water resources would be outweighed by the positive contribution it could make to promoting social development amongst the poorer sectors of the population. In this way some attempt can be made of reconciling the goals of equity and efficiency.

References

Ashton, P., & Turton, A.R. 2004. Transboundary Water Resource Management in Southern Africa: Opportunities, Challenges and Lessons Learned. Paper presented at the International Expert Workshop on Water, Development and Cooperation, Comparative Perspective: Euphrates-Tigris and Southern Africa. Bonn International Conference Centre, 1-3 March 2004.

Scholes, R.J. and R. Biggs (eds.), 2004: *Ecosystem services in southern Africa: A regional assessment*. Council for Scientific and Industrial Research, Pretoria, South Africa.

O'Keeffe, J., Uys, M. & Bruton, M.N. 1992. Freshwater Systems, in Fuggle, R.F. & Rabie, M.A. (Eds.) 1992. *Environmental Management in South Africa*. Johannesburg: Juta & Co.

Turton, A.R., R. Meissner, P.M. Mampane, & O. Seremo 2004: A Hydropolitical History Of South Africa's International River Basins. Water research Commission Report No. 1220/1/04. Pretoria

DWAF, (1994) Water Supply and Sanitation Policy: White Paper, Cape Town

Earle, A. & Turton, A.R. 2003. The Virtual Water Trade amongst Countries of the SADC. In Hoekstra, A. (Ed.) *Virtual Water Trade: Proceedings of the International Experts Meeting on Virtual Water Trade*. Delft, the Netherlands, 12-13 December 2002. Research Report Series No. 12. Delft: IHE. Pp. 183-200.

MacKay, H. 2003: Water Policies and Practises. Chapter in *Towards A Just South Africa – The Political Economy of Natural Resources Wealth*, Reed, D & m de Wit (eds). WWF and CSIR, Pretoria.

Buzan, B., Waeber, O., de Wilde, J., *Security – A New Framework for Analysis*, Lynne Rienner Publishers, Inc., London, UK, 1998.

DWAF (1999) Water Conservation and Demand Management National Strategy Framework. DWAF, Pretoria.

NWA (1998): Republic of South Africa NATIONAL WATER ACT Act No 36 of 1998. DWAF, Pretoria.

WSA (1997): Republic of South Africa Water Services Act No 108 of 1997. DWAF, Pretoria.

Gleick, P.H., (2000) *The World's Water 2000-2001: The Biennial Report on Freshwater Resources*, Island Press, Covelo

Gleick, P.H., Wolff, G., Chalecki, E.L., and Reyes, R., (2002) *The New Economy of Water; The Risks and Benefits of Globalization and Privatization of Fresh Water*, Pacific Institute, Oakland

Marah, L., O'Donovan, M., Martin, R. And Boberg, D., 2004: *Effective Cost Recovery in a Changing Institutional and Policy Environment: Municipal Demarcation, the "Free Basic Water" Policy and Financially Sustainable Service Delivery*. WRC Report 1384/1/04. Pretoria.

McDonald, D.A. (2002) *You Get What You Pay For: Cost Recovery and the Crisis of Service Delivery in South Africa*. Presented at The 3rd Harold Wolpe Memorial Lecture, University of Natal, Durban: 1-25

McDonald, D.A., (2002) *You Get What You Pay For: Cost Recovery and the Crisis of Service Delivery in South Africa*, *Alternatives*, 28 (3)

Welch, A.R., (2005) Obligations of State and Non-State Actors Regarding the Human Right to Water Under the South African Constitution. Sustainable Development Law and Policy Journal Vol V, Issue 1. American University, Washington D.C.

Howard, G. and Brtram, J. (2003) Domestic Water Quantity, Service Level and Health. World Health Organisation, Geneva.

Appendix 1: Case Study on water meters

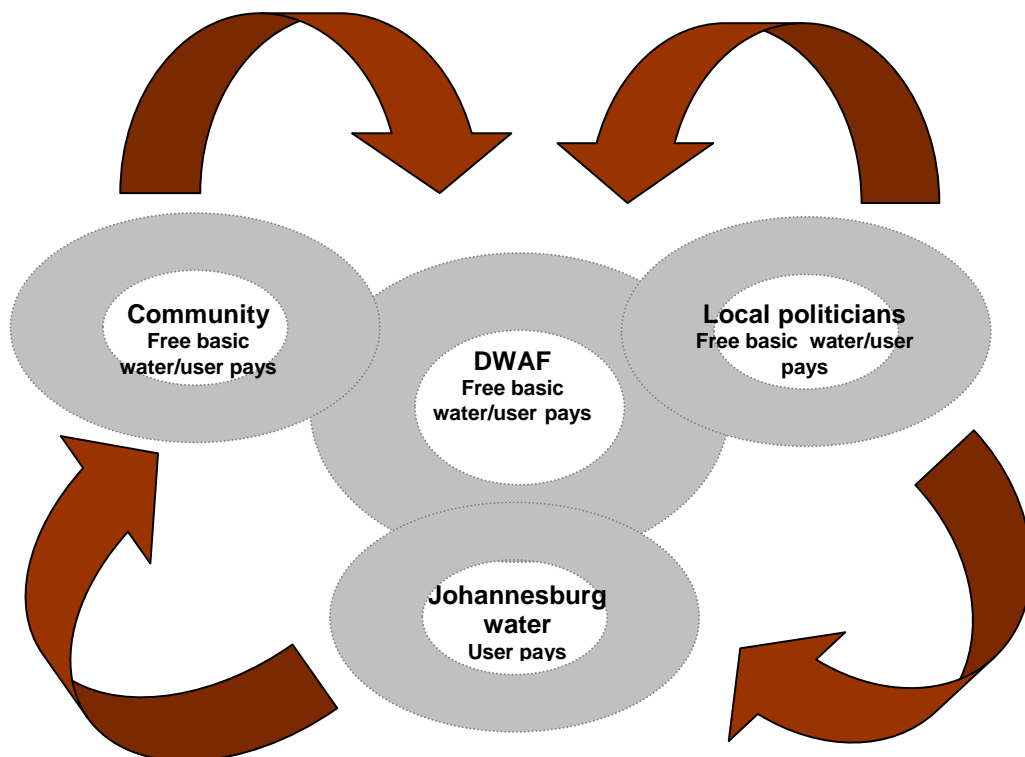
Empirical case study of the introduction of pre-paid water meters in Orange Farm and Phiri ***Fieldwork conducted by Eric Mabuane***

Introduction

Phiri is a suburb of Soweto and Orange Farm an informal settlements near Johannesburg. Both are plagued by high unemployment and an average household income below R1000 per month, although Phiri is economically and socially more stable than Orange Farm. These two sites are the focus of this study on the installation of prepaid water meters, a contentious issue that has resulted in, at times, violent and vocal outcries from residents unwilling to accept the imposition of prepaid meters in their homes. In line with global trends where governments around the world have formed partnerships with the private sector or non governmental organisations to ensure an effective and efficient delivery of water, Johannesburg Water has formed a partnership with Suez and formed JOWAM to provide water to the residents of Johannesburg, including Phiri and Orange Farm. But the water business is fraught with ideological underpinnings which are difficult to reconcile – for on the one hand water is seen as a public good (proclaimed as such in the Free Basic Water Policy) and on the other an economic good. The core argument pivots around the claims that on the one hand citizens have a basic right to essential goods (including water) and on the other hand, a user pays approach whereby citizens are given access to resources but they pay for what they use.

The following diagram illustrates the interconnectedness between key actors involved in water delivery in Phiri and Orange Farm and the core principles that are embraced by each set of actors.

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Empirical research in Phiri and Orange Farm, confirms that these seemingly irreconcilable positions divide consumers into two camps. However, in scrutinising the data that emerges from this research, the two seemingly contradictory world views are not so clearly separated and there are nuances that make divisions between the two ideological positions, less clear cut. Despite the ideological world view that water, as an essential resource for the wellbeing of people, should be freely available, there are financial costs associated with water supply such as storage, abstraction, transport, cleaning and purification, distribution and waste water treatment that make it inconceivable to deliver water at no charge at all. At the same time, it appears that Johannesburg Water, who are responsible for delivering water to households in Phiri and Orange Farm, have opted for prepaid meters as a technological solution to ensure sustainable and effective delivery to consumers. However, the installation of prepaid meters has caused contention in the two sites and for many residents in both Phiri and

Orange Farm, prepaid meters are not welcome. The problems that have been identified around the installation of prepaid meters are problems of both *process* and *principle*. For some consumers, prepaid meters are perceived to be a practical solution to water supply and the contention is not around prepaid meters themselves but rather around how the installation process was communicated (process). But for other consumers, no matter how the prepaid meters are introduced, they remain an unacceptable solution (principle).

Technology as mediator

Technological advancement, manifest in the much contested pre-paid water meter system, is seen by the supplier, Johannesburg Water, to be a practical tool that bridges the divide between water as an economic good and water as a public good. But the prepaid meter has become, for many consumers & other stakeholders, a site of contestation rather than co-operation. Residents in the two communities where the empirical data for this research project was gathered, reflect a schizoid relationship with the state, perceived as both benign benefactor and antagonist and aggressor. The state, as benign benefactor, seeks to please the consumer by supplying 6000 litres of water free of charge and the state, as aggressor, demands payment for all water consumed over and above 6000 litres.

Research process

Fieldwork was conducted in Phiri and in Extension Four of Orange Farm during the early weeks of November 2004. The quantitative field component involved the administration of 50 standardised questionnaires to respondents in the two communities, a total of 100 questionnaires in all. A qualitative field component involving face-to-face semi-structured interviews with key stakeholders in both communities provided an in-depth understanding of the attitudes of residents to pre-paid meters.

Key findings

Unequal distribution of prepaid meters

The Orange Farm community of Standerton (extension 4) is a 'beneficiary' of Johannesburg's pre-paid meter installation. The majority of respondents at this site consider that the consultation process between residents of Orange Farm and staff of Johannesburg Water was poor. Another area of contention around the prepaid meter system is that there are more than 8 extensions in Orange Farm and, according to respondents in Extension 4, there is no reason for Extension 4 to be subjected to prepaid meters if the other extensions in Orange Farm are not. Because unemployment rates in Orange Farm, extension 4 and elsewhere, are high, the inability rather than the unwillingness to pay, becomes evident. For many residents, it seems that the non-payment is because of lack of funds and is not because the residents have adopted an ideological view that prepaid meters should not be allowed.

Local politicians and financial gains

Residents complain about the politicisation of water and they are reluctant to accept the political deals that are drawn up between their local counsellors and Johannesburg Water. The installation of prepaid meters offers a lucrative business opportunity and there are financial gains for politicians who enter into business negotiations with their families and friends, and who are the primary beneficiaries, according to some residents, of the prepaid meter system.

Unintended consequence of contention

An unintended spin-off of the 'quarrels' around pre-paid meters is the building of social capital. Partnership and coalitions between residents from Phiri and Orange Farm where organisational affiliation between Orange Farm Water Crisis Committee (OWCC), the Soweto Electricity Crisis Committee (SECC) and the Anti-Privatisation Forum (APF) has created networks between residents and strengthened civil society bonds. These bodies have formed an alliance protesting against Johannesburg Water and the State position on prepaid water meters and that 'for those who really cannot pay, well, they know that

there is nothing for mahala (free).¹ The APF – and its partners - are opposed to Johannesburg Water whose mission is to ‘deliver a sustainable, affordable and cost effective service’ and who have taken the position that all consumers must pay for the costs involved in production of such a service.

Empirical evidence

Orange Farm has ‘benefited’ from prepaid meters for several years. The meters were installed by Johannesburg Water and were supposedly, well accepted by residents. An intensive awareness campaign has been, according to Johannesburg Water officials, successful and ‘everyone in Orange Farm should now know about prepaid water meters’. The micro study in Orange Farm yielded alarming data to the contrary. The following statements reflect high levels of dissatisfaction of pre-paid meters, both the pre-paid meter itself and the process that was followed by Johannesburg Water to install them. This is in direct contrast to reassuring claims by Johannesburg Water officials that great care was taken to disseminate information.

‘There are constant water cut offs. Even though I buy water my water at times is cut off before I can use it to my satisfaction.

A higher percentage of female respondents (70%) than male respondents (57%) express anger with the government for installing pre-paid meters. The highest percentage of dissatisfied customers is in Orange Farm. Disconcertedly, the installation of pre-paid water does not in all cases appear to have increased awareness of consumption nor does it appear to have had a positive effect on consumption patterns. Seventy one percent of consumers do not know how much water the household uses despite having pre-paid meters. There is a correlation between awareness of consumption and acceptance of prepaid meters with the same percentage of respondents saying that they are unhappy with the prepaid meter system and responding that they do not know how much water their household consumes monthly. This evidence suggests that the installation of prepaid

¹ Introduction to ‘Nothing for Mahala’ report by the Anti-Privatisation Forum (APF), Report 16, Centre for Civil Society Research

meters has not yet enhanced water wise behaviour and is not contributing, as was intended, to an awareness of water consumption at the household level.

The three key concerns around prepaid water meters, that will be unpacked below are:

1. Water should be free for everyone
2. The system is inefficient, there are too many water cut-offs
3. 6000 litres is not enough

1) Water should be free for everyone

87% of respondents in Phiri believe that water should not be free for everyone but only 45% in Orange Farm have the same opinion. The vast majority of respondents in both places are aware that the free basic water policy does **not** imply that households can use as much water as they want without paying. In Orange Farm there are only 16% of respondents who do believe that this is true and a very low percentage, 3% in Phiri who believe this to be true. This is critical to the understanding of what the objections are about pre-paid meters and the findings are reassuring for those who are in the business of delivering water because the data suggests that residents accept and understand that water has an economic good.

On the other hand, there was a high percentage of residents, at both sites, who felt that water should not be cutoff if households do not pay for their consumption. These perceptions suggest that water is considered to be a public good and that if there is an inability to pay, water should not be cut-off. The statements, in direct contrast to one another, reflect an unresolved tension between water as a public good and water as an economic good.

6000 litres is not enough: water should be free for everyone

60% of consumers in Orange Farm feel that that water supply to their homes is inadequate and the same percentage oppose the installation of water meters. In Phiri there

are only 18% who feel that their water supply is inadequate and who oppose the installation of prepaid water meters. There are some residents in both sites who are conscious of water saving and whose consumption patterns reflect responsible usage of water but in Phiri, more residents have a sense of the value of water. This is reflected in the following statements:

'I have enough water and since I know how much I can afford I try to use what I can afford'

or comments such as

'I think the service is right, you get what you pay for. I have no problem with it'

are in contrast to statements such as

'lot of people try to save water since we can't afford it, we have cooking and laundry to consider and it is not enough'.

The difference between Phiri and Orange Farm is striking with Phiri community being more observant about a range of issues concerning water and water wise practise. A high percentage of consumers from Phiri have a good sense that because nothing is free, consumption patterns need to be carefully monitored.

The Orange Farm community manifest less 'responsible citizen' attributes and their water consumption patterns appear to be more careless, for instance, reportedly, these residents are likely to wash clean the street outside their dwelling in contrast to Phiri citizens who use a broom to sweep in front of their dwellings. The statements made by residents of Phiri and Orange Farm below speak well to the issues that emerge around prepaid water meters.

In Phiri, for instance, despite efforts at saving, the water supply is inadequate:

When I have not money to buy water, I can't use the toilet, I can't do laundry, and most importantly I can't even cook or do anything without water

Or another

I don't want to pay for water cause I am unemployed: If I don't have money, I won't have water and I can't live without water

And

I don't think it is right to buy water. I always have to wait until I have money to have some more water. So I can not see anything good about this system, I am not happy at all

The statement above is counteracted by the following

I am not happy because some extensions are not paying for water and do not have the prepaid meters. Everyone should have prepaid meters

The two issues, free basic water and the amount of free basic water appear to be conflated and the separation of these issues is problematic. It is difficult to judge whether 6000 litres is an adequate supply. For some consumers, the problem with prepaid meters is the quantity of water that is provided free of charge but for others all water that is consumed should be free, even if more than 6000 is consumed. For this set of consumers, the principle of paying for water is intolerable.

This water gets finished just when you need it the most, If you have a large family it means your water will get quick to finish

But all residents are not unhappy with prepaid meters:

What I like about these meters is that you don't see water flowing in our streets and being wasted

Several respondents recognised the advantage of saving water and of having a more efficient water management system in place:

Since they installed pre-paid metres, there is no pipe leakage in the street and they fix it quickly. People don't waste water like before

Or again the satisfaction that water consumption is controlled effectively

I am satisfied with 6000 free litres. If I use the water correctly, its enough for the families to consume and use and its sufficient cause we use it sparingly

Or

I have never had a problem with it and the service for me is a great service

And

I am happy now because I don't get a huge bill and I pay for what I use

The ambivalence about prepaid meters is eloquently expressed in the following statement

I can say yes and I can say no at the same time. Yes because every 1st day of the month 6000 litres of water is free. But I can say no because these meters are quick to finish the water

The following reflects a strong position taken against water as an economic good:

Water was not created to be sold. It is a free flowing substance

Or again

How can we pay for water, we can pay for the labour to bring it here but then it must be free for everyone

The system is inefficient: there a number of water cut-offs

Some consumers feel they are not beneficiaries of the 6000 litres on the 1st day of every month as promised, for others, they feel that they are beneficiaries but that 6000 litres is inadequate. The following observations suggest that prepaid water meters are considered problematic because of inefficiency in the system:

'even though I buy water, my water at times is cut off before I can use it to my satisfaction'

or again,

there are constant water cut-offs, the more I want to use it the harder it is to get it'

and

Remember, the water meter is only a machine. It can stop functioning at times. It cannot work like humans. When it stops I do not have water at all. So I can't say whether I have sufficient or not because sometimes I don't have any at all

The data reflected on the vulnerability of households when water is cut-off. In Phiri it appears that water cut-offs are experienced independently of whether or not a family has consumed the full quota

Water just stops, it is cut off anytime without notification

Technological problems do not make the issue any easier

The machine is not properly installed. It stops any time when you need to use it

It is not always clear however whether the problems are always technical or whether the source of the problem is misunderstanding how the system functions or/and unawareness of consumption patterns because the same respondent noted that

The meter is running fast and water is too expensive

Summative remarks

The prepaid meter system is highly contentious and the communities in both Orange Farm and Phiri are divided around the prepaid water meter system.

Johannesburg Water officials were consulted in Orange Farm and interviews with these officials suggests that officials were despondent and felt that the residents of Orange Farm were 'very ignorant' and that '*there are brochures available for everyone*'. Johannesburg Water are also aware that the project has only just begun in Orange Farm and that the first phase of the project in Extension 4 is experiencing obstacles that should be smoothed out by the time the pre-paid meter rollout to other extensions was ready. There was some defensiveness because officials felt that residents did not bring their grievances directly to the officials but complained indirectly to others making it more

difficult for Johannesburg Water to address the problems that were emerging around prepaid meters face-to-face with residents.

Interestingly, the boundaries between APF and the State (in the form of local government) are more fluid than expected and members of the APF are also members of the State, holding therefore ambivalent identities around the water issue. Contentions around water as an economic good are sometimes difficult to resolve within government and some officials retreat to the APF which serves as a platform for them to express freely views on prepaid meters that do not coincide with official government policy.

Levels of awareness of water consumption vary considerably both intra and inter community but it does seem that where information is better disseminated, for instance in the case of Phiri, there is less resistance to the prepaid meter system. Johannesburg Water faces problems that are at the core of concerns around whether water is a public good or an economic good. Heated debate continues and will most likely continue for some time until the tension between water as an economic good and water as a public good is reconciled.

Appendix 2: Sample Letter

19-FEB-2005 10:18 FROM: SOCIAL SURVEYS/SCC

0114861029

TO: 0866725962

P. 1



Joh^hburg

08 November 2004

Re: Operation Gcin' Amanzi

Dear Customer

Operation Gcin' Amanzi aimed at reducing the loss of water through the rehabilitating of the old infrastructure, and the installation of free-pay meters in each household, to enable JW to provide you the valuable customer with your Free Basic Water and further enable you to pay for the actual water consumption, rather than the deemed consumption, is nearing completion in your area.

We are aware that you still have not signed for the installation of a meter or a standpipe in your house. We would like to inform you that your failure to sign for any of the two available options might unfortunately lead to you being left without water during the decommissioning phase of the project.

JW and your Ward Councilor Mr Pat Kunene would like to meet with you to discuss your concerns and reservations concerning Operation Gcin' Amanzi. We hope to be able to reach an amicable solution and pave a way forward.

We suggest to meet with you on 11 November 2004 at 17:00 at the Senoane Admin Office, in Councilor Kunene's office.

Your presence will be highly appreciated.

Kind regards

A handwritten signature in black ink, appearing to read 'Bonginkosi Xaba'.

Bonginkosi Xaba
ISD Manager
Tel: (011) 688 1431
Mobile: 082 331 7851

A handwritten signature in black ink, appearing to read 'Pat Kunene'.

Pat Kunene
Councilor Ward 15
072 150 5250

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Johannesburg Water
NSDD

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Directors:

Mr Andries Tshabalala (Chairperson) • Ms Jocelyn Armstrong • Ms Vanida Lennon • Ms Marie Janse van Rensburg • Dr John Kilani • Mr Neil Macleod • Ms Rosalie Manning • Mr Jacob Mashike

JOHANNESBURG WATER (PTY) LTD REG NO. 2000/0297187

Appendix 3: Stakeholder participation process

Supplied by Johannesburg Water & not edited by authors of this report:

OPERATION GCIN'AMANZI COMMUNITY LIAISON AND SOCIAL FACILITATION

Consultation process was conducted through formal structures representing the community, i.e. through the ward councillors and ward committee structures. The following structures were consulted and engaged with from July 2002.

- Regional Directors: Region 1 & 2; 6, 7, 10 and 11

Greater Soweto

- Councillor Mobilisation Programme commenced in October 2002
 - 6 workshops held
 - Study tour to Mogale City (visit large scale prepayment intervention programme and obtain first-hand info from Kagiso residents: January 2003)
 - Communication packs developed and distributed to assist Councillors in their feedback sessions to their constituencies (May 2003)
- Ward Committees Roadshow
 - workshops held with all ward committees in Greater Soweto
 - Follow up meetings held with all 43 ward committees
 - Feedback sessions of ward committees to their represented sectors
- Other stakeholders
 - Other CBOs and NGOs identified and workshopped
 - JW advised not to engage with political structures as it may create impression that this is a political project. Instead, JW advised to engage with structures representing community as this is a community-based project.
 - Furthermore, JW advised not to engage with civic associations exclusively as these are represented in the ward committee structures
 - Contact sessions with SANCO held with some of the sub branches in Soweto but overall fragmentation of this structure proved difficult for meaningful engagement.
- Public Meetings (held in Greater Soweto since November 2002)

Consultation Process for Phiri Prototype

- ward committee workshops
 - Follow up meetings of the ward committee sectors with their respective constituents
 - Briefings by Clr Kunene at monthly public meetings since November 2002, where Operation Gcin'amanzi is a standing agenda item at these meetings. JW attended some of these meetings and were given platform to discuss the project.
 - Additionally, 4 public meetings held to formally present the project and address issues and/or concerns
 - Targeted sectoral information sessions held with stakeholders including women's forum; youth groups; schools, teachers and parents; pensioners and veterans groups (12 sessions held)
 - Commencement of project formally announced at public meeting held on 26 July 2003 and flyers distributed to affected residents of the first phase
 - Consumer education including door-to-door campaign and community workshops commenced in September 2003.
 - Study tours to Kagiso and Stretford Ext 4 for various community groupings
- Public meetings continue to be held on an ongoing basis in various wards throughout Soweto. The bulk of these sessions were organised by CoJ Regional Council Liaison and Support who are mandated to facilitate public meetings through their ward administrators.