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WATER SERVICE SUBSIDIES AND THE POOR: A CASE STUDY OF GREATER NELSPRUIT UTILITY COMPANY, MBOMBELA MUNICIPALITY, SOUTH AFRICA

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1. INTRODUCTION

In many countries water has been historically considered a "free" resource of unlimited supply that is managed by the state. Users did not pay for the true cost of supplying water and often paid only for a proportion of the cost of transferring, treating and disposing of water i.e. its use was heavily subsidised, (Calder,1999:57).

Recent reform of the water services sector in both the North and South has been strongly influenced by neo-liberal views, which have radically altered the provision of water services. The new guiding principles for water services management recognise water as an economic good that should be priced to reflect its true cost because water subsidies distort the market and do not encourage efficient use of water, an important consideration in water scarce countries. It is argued that whilst subsidising infrastructure development and water in many countries was seen as a 'pro-poor' policy it was actually anything but, because it was largely the middle classes that benefited. It is suggested that the poor are already obliged to treat water as an economic good. The poorest sections of society are often not connected to mains water and waste water services and have been forced to buy water from street vendors for a relatively high price, whilst the middle classes enjoyed the benefits of subsidised water, (DFID,2001:31). Private sector management practices also advocate efficiency, and cost recovery is to be pursued. The state should no longer be viewed as having a monopoly over service provision; private sector participation (PSP) and even the privatisation of water service provision is promoted as an alternative.

Cost recovery refers to the process by which the service provider (state or private company) recoups all, or the majority of the costs associated with supplying a service (including the operating costs, maintenance costs and infrastructure costs). The difference between public and private service providers is that private companies would expect to generate a surplus amount above the actual costs of supplying a service ie profit for their shareholders. In comparison public owned companies are not usually under pressure to generate a profit, (McDonald,2002:18).

The effective operation of any cost recovery model is dependent on the following three factors, without which any programme would be rendered ineffective**.** First, the ability to measure consumption at the household level "regularly and accurately" is a fundamental component of any cost recovery model; meters[1] can be used for water services which record the number of kilolitres consumed (electricity: number of kilowatt hours) – "without meters it is virtually impossible to apply marginal cost pricing"). Second, the operation of a payment collection system (postal/payment system) is equally important, and this requires an effective administrative system. Third, where consumers do not pay their bills there need to be mechanisms to force payment ie credit control measures. Consumers can be threatened with restrictors in the pipes or even to be cut off for a temporary period, which with repeat 'offenders' could result in the permanent removal of infrastructure to prevent illegal reconnections. The most drastic measure in the arsenal would be legal action resulting in the eviction from one's home for non-payment, (MacDonald,2002:19).

The pricing structure is fundamental to any cost recovery policy. The first important consideration is whether usage can be measured accurately. In the case of water and water-borne sewage and electricity, usage can be measured volumetrically[2]. Providers are able to recoup costs by charging the end user the "(full) short-term marginal cost of production[3] plus a proportion of long-term operating and maintenance costs" of the bulk infrastructure required to produce the water and distribute it. These costs can be determined in a number of ways, the most common i.e. the orthodox model based on a downward sloping marginal cost curve; based on economies of scale, users who consume high levels of water are charged less per unit than those whose usage is low. (McDonald,2002:18). Whilst in economic terms this model makes sense it is not an equitable system because lower end users, typically low income households, are in effect being "penalised". In effect water for essential uses such as drinking, cooking and washing is priced more highly than water for non-essential or luxury use. This system also does not encourage water conservation, an important consideration in a water scarce country like South Africa.

Progressive block tariffs are another model on which a pricing structure can be based. This model is the inverse of the previous model because unit costs increase with consumption levels, in theory making low levels of consumption (blocks) 'more affordable' or even free.

[1] Whilst the literature implies the necessity of meters for cost recovery, in fact cost recovery can be pursued without meters, as in the UK, where in general consumers are charged a flat rate.
[2] It is more difficult to measure services such as refuse collection.
[3] Volumetric rate for the marginal cost of every kilolitre of water consumed.

This model is more equitable[4] because low end users/low income households are not penalised to the same extent. Progressive block tariffs also provide an incentive to curb non-essential water consumption i.e. encourage water conservation.

Cost recovery has become the general model for water service delivery but it is likely that there will always be an element in most societies for whom affordability is an issue. Mitlin argues that affordability can be an issue at several levels. Where services have been extended research has shown that not all households are able to afford the connection fees and of those that have been able to connect many may be unable to pay regular bills. Affordability is also an issue with regards to investments in infrastructure. Both public and private companies have found extension targets difficult to meet in part because of the predicted low return on the investment. It is suggested that both private and public companies are likely to face similar challenges. The question is how can the needs of those in extreme poverty, i.e. equity, be accommodated in a model of delivery where the true cost of water is charged and cost recovery is pursued? It is argued here that there is a need to create a space where commentators can engage in an informed discussion over the role of subsidies.

There is very little literature[5] on the existence, operation and financing of subsidies in the water services sector. This dearth could be down to the continued focus on the 'public-private' (ideological) debate in water service provision[6]. These discussions to date have tended to be rather narrow in their focus and have yet to explore in any depth the role of subsidies. Donor agencies have also been reluctant to engage in a discussion on subsidies in any real depth because support for subsidies could be seen to run counter to their support for viewing water as an economic good and cost recovery mechanisms.

Even if there is recognition of the need for subsidies if the poorest segment is to be served, there does not appear to be a universally accepted model about the form the subsidy should

[4] However, equity can actually be compromised if the block tariffs are not steep enough. If the blocks increase too steeply, however, this could actually penalise those households that have a low income but many dependants. The tariff needs to be carefully planned, based on a knowledge of usage patterns and income levels of consumers. Another consideration is that very steep rises could discourage high level use: while this has conservation benefits, the tariff levels have to be set carefully or the provider could lose valuable income which is required to subsidise lower level usage.

[5] One of the few papers that describe subsidy systems in operation is that of Andres Gomez-Lobo and Dante Contreras (2000).

[6] There is still considerable interest and resistance in some quarters to the involvement of the private sector in water services as well as the sustained criticism over the 'commodification' of water. Some academics are fiercely opposed to cost recovery in water services and even advocate the decommodification of water services, arguing that water services should be viewed as being a public good. An example of this is the McDonald and Pape collection which will be discussed in Section 2.

take. The important question is how can subsidies be targeted so that it is the poor that accrue the benefits and not the middle classes, and so that costs are minimised and access to water services improved? Can a targeted subsidy system be used in conjunction with a cost recovery model, or are they incompatible? Chile and Colombia have employed a cost recovery model of service delivery but they also recognise the need for a subsidy system to improve the access of the poor to water services; they have, however, used different mechanisms to target the poor. Chile's system is based on means testing to determine the poor whereas the Colombia strategy is geographically based, known poor areas receiving the subsidy (Gomez-Lobo and Contreras,2000).

The other important debate revolves around the finance of subsidies. Should subsidies be financed simply through cross-subsidisation within a water servicing area, ie richer customers pay more so that the poorest pay less or should the subsidy be financed (wholly or partly) by the national government? The other important consideration is who should receive the finance? Should the subsidy go directly to the consumer or should it be transferred to the water provider, who then targets those in need? For a fuller discussion on these considerations see Mitlin 2004[7].

This particular piece of research is concerned with understanding how water services are made affordable to the poor in South Africa and what the significance and outcome of subsidies are with regards to improving the access of the poor to water services. South Africa provides an interesting study because under apartheid water was provided by the state at heavily subsidised rates, and levels of service provision were racially determined. The post apartheid government has reformed the water sector in the vein of the market-oriented paradigm. What makes South Africa interesting is that its style of cost recovery differs from the orthodox model because it has given thought to issues of equity and has developed a subsidy system, Free Basic Water.

The first part of the paper will look at the current system for water services provision in South Africa, including a description of the formal subsidy system in place, Free Basic Water and how it emerged. This section will also include a discussion on whether affordability is still an issue in the South Africa of 2005.

[7] Beyond Second Best: The Whys, Hows and Wherefores of Water Subsidies.

A case study of Mbombela Municipality was undertaken to determine how water services are made affordable to the poor at the local level. Mbombela allows for an interesting study because the municipality is the Water Services Provider for half of the area and the rest of the area has its water supplied by a largely foreign owned private company, the Greater Nelspruit Utility Company. GNUC has entered into a 30 year concession arrangement with Mbombela. This paper allows an interesting comparison to be made between the municipality and GNUC over tariff structures, level of cost recovery and credit control measures employed and how the formal subsidy system is being operated and financed at this level. The presence, form and scale of informal subsidies[8] will also be determined as well as their financial implications.

2. METHODOLOGY

The report is based on fieldwork in South Africa during February and March 2005. A background to water services provision was obtained from DWAF documentary materials and other sources including McDonald and Pape (2002) and Plummer (2001). In addition, two recent reports (Smith et al 2004 and Wellmer 2004) supplied useful material, though their focus is on the GNUC concession, i.e. privatisation and commodification of water services. The aim of the present report is rather to throw light on the operation of subsidies and the financial aspects.

The final week of the study was spent in Pretoria, in order to collect data providing an overview of water services in South Africa and the formal subsidy system in operation. Two interviews took place with the DWAF National Government official involved in drafting the Free Basic Water policy and useful DWAF documents, presentations, reports and information packs for municipalities were obtained (refer to bibliography).

Five weeks of data collection on water service provision in Mbombela Municipality form the basis of the case study, Refer to Map 1. Mbombela as a municipality is a relatively recent construct (2000) and is one of four local municipalities falling under the District Municipality of Ehlanzeni. Nelspruit, the principal town of Mbombela, is also the provincial capital of Mpumalanga, one South Africa's nine provinces, located in North Eastern South Africa.

[8] Less formalised subsidy arrangements, for example allowed non-payment, illegal connections and tampering of meters ie the permitted theft of water

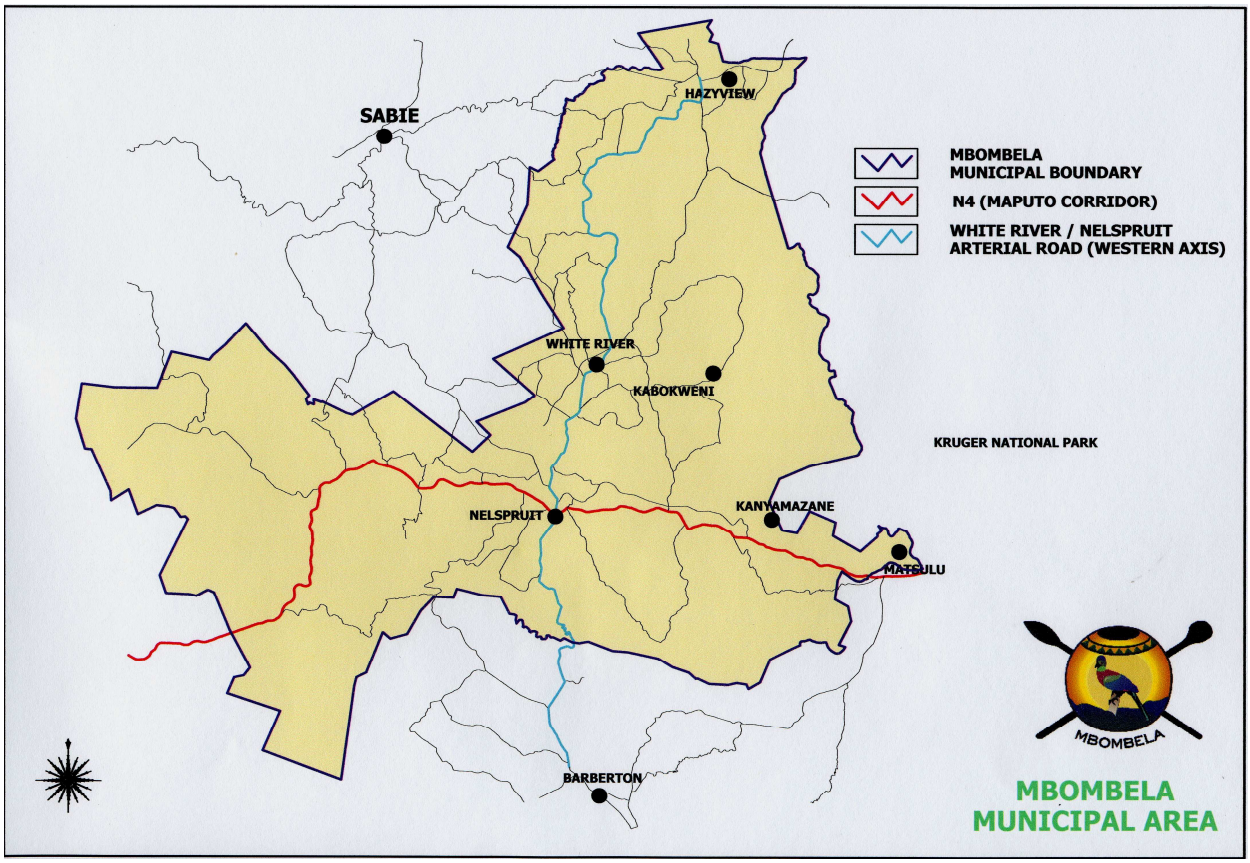
Mbombela was selected for the case study because this researcher had previous experience of the water sector in the area. Many key stakeholders had previously cooperated in another CRC funded research project, and were able to provide further introductions, thereby accelerating the research process.

Municipal boundaries have changed since the concession was signed and this explains why some areas are served by a private company, and others by the municipality itself (both a WSA and WSP), though all fall within Mbombela Municipality. Thus an interesting comparison was possible between areas with different providers. The researcher was able to look briefly at another municipality, Nkomazi, allowing further comparisons, although time available did not permit the organisation of focus groups.

The principal data collection method was semi-structured interviews with identified stakeholders. Loose themes and topics to be discussed were developed for each interview but these were on a similar line for 'triangulation'/verification purposes. GNUC consumers faced identical questions in mini-surveys and these were briefly piloted at a taxi rank to gauge suitability and allow modifications to be made.

A stakeholder referencing system was devised so that comments could be attributed to a particular source, and this has been employed throughout the report. Details of the stakeholders consulted are given in Appendix 1. The position of each respondent in their organisation/stakeholder group is given for contextual purposes.

Map1: Mbombela Location Map



The GNUC concession area was the main focus of the investigation and interviews were taken with GNUC personnel including the General Manager and operational staff. Statistics and reports were also obtained from the concession Monitoring Unit. Two Mbombela Councillors (Democratic Alliance and ANC) and technical and financial municipal officers also provided information on water services in the municipality as well as the tariff structures. The Regional Director of The Rural Action Committee was able to provide an overview of the settlements and the issues faced in the course of the organisation's work with rural and peri-urban poor in the area. The history and changing geography of settlements was clarified, and the importance of differentiating between townships and trust areas emphasised because levels of service and ability to pay for them vary. There is also the added dimension of more recent 'squatter' settlements on the fringes of the townships.

With regards to GNUC customers the researcher focused on two main formalised township areas: KaNyamazane (including Tekwane South) and Matsulu. The nearby Trust area of Daantjie and Mpakeni, where settlements are less formalised, was also included in the study. An effort was made to speak to a range of household types: female headed households, male headed households, pensioner headed household, unemployed headed

household, employed headed household (refer to Appendix 1), residing in different wards of the townships. This fieldwork was undertaken over two days mid week. Locating employed headed households was problematic but we were able to identify households where people were shift workers or ran businesses from home. Information on the household type and structure was collected as a means of categorising the household. Names were not taken because it soon became clear that the residents were wary about the implications of the research, especially those in arrears or those who have made illegal connections. In the Tribal Area a focus group was held at the Tribal Authority offices with the local Chief and three community representatives. To provide a comparison to the poor living in the concession area a focus group was held in the village of Makekutu (serviced by Mbombela Municipality).

The majority of respondents were confident to use English. A translator accompanied the researcher for two days of fieldwork in the GNCU Concession area and for a day with communities in the Malekutu area. Even here some of the respondents were confident to talk in English and the translator provided input as required. The translator/research assistant was a resident of KaNyamzane Township and knew the surrounding areas very well and was thus able to provide an insight into the geography of the area (differences between wards in terms of affluence), which was invaluable.

Mbombela provides an interesting mix because it encompasses large former homeland areas and townships: it is a challenging environment for supplying water services. It is, however, recognised that a case study approach has limitations: each community has a particular set of dynamics which makes generalisations problematic. This is why every attempt was made to collect data on the rest of Mbombela (not just the concession area) and as far as possible, surrounding municipalities.

2. WATER SERVICE PROVISION IN SOUTH AFRICA

2.1 The Geography of Water Service Provision under Apartheid

The legacy of the Apartheid era – with the removal of black and coloured populations to townships or artificially created homelands – is apparent in terms of water service provision. A three tier system existed whereby the highest level (white towns), were supplied with full reticulation at high pressure[9], billed but with heavy state subsidy. The townships, situated

[9] Research by Ahmad (1995) indicates that during the 1970s and 1980s per capital infrastructure investments in the white residential and industrial areas were on a level with (if not beyond) that of Western Europe and North America.

several kilometres away, had a planned layout with taps to individual residences and simple waterborne sanitation. A flat rate was paid for all municipal services in a combined bill. The third tier was found in the trust areas (the former homeland areas) where water was supplied to communal standpipes (often distant from households) free of charge, and the use of rivers and streams was widespread. Approximately 14 million South Africans prior to 1994 were without access to clean basic water[10], (DWAF,2004b:31).

The boycotting of payment for municipal services in townships and trust areas was central to the ANC's rally to make South Africa "ungovernable", but no serious crackdown occurred for fear of increasing unrest. The legacy of this example of allowed non-payment ("de facto subsidisation of township services") is still apparent. Full cost recovery was not pursued at any level of provision: basic municipal services were heavily subsidised (formally, in terms of infrastructure and informally, in terms of the rates boycott), though in a "racially skewed manner", (McDonald,2002:20[11]).

2.2 The Post-Apartheid Era

Redistribution was high on the agenda in 1994 and the Reconstruction and Development Programme (RDP) was initiated to reduce inequalities of service provision. Accordingly, the Department of Water Affairs and Forestry (DWAF) took on the function of overseeing water services and developing national guidelines: previously this was in the hands of local governments, and the Bantustan governments in the homelands. An additional two million water connections were made in the first years of democracy through the Community Water Supply and Sanitation Programme. However, as the ANC government became increasingly influenced by neo-liberal thinking, the RDP was abandoned in 1996 in favour of the Growth, Employment and Redistribution (GEAR) framework. This sharp change in direction away from a redistributive state towards an 'enabling' state with notions of cost recovery is apparent in legislation relating to local government and service delivery, (McDonald,2003:4), (Wellmer,2004:20).

Fuller cost-recovery became an inevitable route to fund service delivery in the face of stringent fiscal constraints imposed by central government. Drastic cuts in central government transfers to local government (85% between 1991-1997 and a further 55%

[10] At least 21 million, around 50% of the population, were without access to basic sanitation.

[11] Reference is made to the book edited by McDonald and Pape because it presents a number of case studies that explore the issue of cost recovery and municipal services. It is recognised that this collection is controversial, partly because of its association with the two editors (McDonald's use of statistics is viewed dubiously, by DWAF in particular, and Pape is currently incarcerated) and because it takes a rather radical view on cost recovery. Useful insights can nevertheless be gained.

between 1997 and 2000 - the Finance and Fiscal Commission) meant funding was completely inadequate to tackle infrastructure backlogs: R3 billion in 2000 to tackle an estimated minimum R45 billion/maximum R89 billion backlog[12] . Additionally there were budget caps despite increased responsibilities and a cap on rates preventing progressive taxation to bolster the revenue pool. Central government would no longer act as guarantor for municipal loans, and the harsh realities of the market were felt, (McDonald,2003:23), (Wellmer,2004:20).

Cost recovery encourages different levels of service provision[13] based on perceived ability to pay: there is little incentive to provide a high level of service in an area of chronic poverty as investments and operational costs are unlikely to be recovered. Poor communities have little chance of receiving upgrades: the so-called "short term measures", (Xali,2002:103-4) are in all probability long-term since greater investment would not be recovered.

2.3 The Water Legislative Framework

At this point it is appropriate to set out the legislative framework governing water service provision in South Africa. The 1996 DWAF White Paper on Water Services placed strong emphasis on basic needs: 6KL per household per month at a minimum flow rate of 10 litres per minute within 200m of a household, with 98% per annum assurance of supply, (DWAF,2002e:13). A minimum standard of sanitation recommended is a well-maintained Ventilated Improved Pit (VIP) latrine. These rights were enshrined in South Africa's 1996 Constitution. However, these rights are countered by the clause in the constitution referring to "available resources" and allowance is made for local authorities to "progressively realise service delivery", (DWAF,2002j:3). According to McDonald and Pape, this 'get out clause' has been used to justify failing to provide access to the rights in question, (McDonald,2002:4).

The 1997 Water Services Act states that every South African has a "right of access to basic water supply and basic sanitation" and "reasonable measures" must be taken to realise these rights. Responsibility for the provision of water services rests with local government

[12] 2000, Department of Provincial and Local Government, Municipal Infrastructure Investment Framework, draft report.

[13] Households who earn less than R800 a month, an estimated 20 per cent of the population, can only expect to receive a basic level of supply i.e. communal standpipes linked to a regional scheme or motorised borehole which tend not to be metered. Households with incomes above R800 level can expect an intermediate level service which would equate to the provision of metered yard taps for water and simple water-borne sanitation. Middle income families can expect to receive full services. Here water is supplied by direct house connections at high pressure and is metered. Full water-borne sanitation is supplied and waste is disposed of at a sewage treatment plant, (Wellmer,2002:26), (Xali,2002:103-4).

(the Water Service Authority – WSA) under DWAF's supervision. Cost recovery is to be pursued but access cannot be denied on non-payment grounds if inability to pay is proved, (DWAF,2002e:7).

National government will provide funds only to meet basic infrastructure costs. The responsibility for the former Homeland schemes (taken on by DWAF when the areas became part of South Africa in 1994), is to be transferred to local authorities. DWAF's future role is the regulation of the sector.

The 1997 Act provides a framework for Private Sector Participation (PSP) in service delivery: the municipality i.e. WSA can enter into a variety of partnerships, for example public/public; public/private or public/NGO or community groups, (Stanley,2001:136), but in reality municipalities have little choice since PSP is their only real option of accessing capital. According to Plummer (2001:5) 10 public/private partnerships were in place by 2000, actively encouraged by central government. The experience of PSP in South Africa has yielded mixed results[14].

The 1997 Act placed considerable powers in the hands of the Minister for DWAF. It is pertinent here to cite section 10(1): "The Minister may, with the concurrence of the Minister for Finance, from time to time prescribe norms and standards in respect of tariffs for water services" – and these are enforceable. Local government is responsible for setting tariff rates in line with the 1997 Act and the 2000 Municipal Systems Act. Section 74 (2) of this latter Act sets out the tariff policy to be implemented: equitable treatment of users; payment in proportion to use; charges to poor households to reflect only operating and maintenance costs and special tariffs for low levels of use by poor households. The Act of 2000 enforces a cost recovery system and endorses credit control.

The 1998 National Water Act established the concept of "The Reserve", whereby legal provision is made for prioritising basic water supplies i.e. domestic water has a higher level of assurance than supply for agriculture.

[14] There has been a lot of resistance to private foreign companies especially following increases in tariffs. Organised resistance to the steep tariff increases by the French Water Company (Ondeo), which had a management contract to deliver water to Fort Beaufort, contributed to a review and ultimately in a judicial nullification of the contract in December 2001 (Morgan,2003:5, also see Pape and MacDonald).

2.4 Questions of Equity: the Introduction of Free Basic Water

The current South African model of cost recovery is not entirely orthodox because the government has attempted to address issues of equity whilst pursuing cost recovery. By 2000 there was a growing realisation within DWAF that the pursuit of an orthodox cost recovery model, which required customers to meet the cost of delivery, was having a negative impact on the health and wellbeing of low income communities who could not afford enough water to meet health and hygiene requirements. DWAF realised that this was defeating its policy that all South Africans should have access to a basic supply of water[15], (DWAF,2000) and that given "the economic legacy of the pre-1994 era, the right to water must effectively mean free basic water, if it was to mean anything at all", (DWAF,2004b:32). In February 2001[16] it was announced that the government had approved a policy that would "ensure that poor households are given a basic supply of water free of charge". The level agreed was 6,000 litres per household (this is calculated on the assumption of an eight person household[17]) and was in line with the 1997 Act. FBW is now the formal water services subsidy system in South Africa[18]. There are three different levels where subsidies can be applied in the water services sector: towards the provision of bulk infrastructure, the provision of household level infrastructure and the provision of water itself. In the case of South Africa, municipalities receive subsidies for all three aspects of water service provision: operating subsidies for the bulk transfer regional schemes, the Municipal Infrastructural Grant for community level infrastructure and FBW.

In early DWAF documents it is clear that Free Basic Water was intended for poor households only (DWAF,2000:1). The FBW policy, however, has largely been interpreted as meaning FBW for all, regardless of income (DWAF,2002f:7). Many municipalities, including Mbombela, have decided to provide FBW to all households. DWAF recognise that applying FBW universally has a number of benefits: it is seen as being more politically equitable and does not require targeting which can be expensive, inaccurate, an ongoing process and a huge administrative burden, (DWAF,2002j:3). If a rising block tariff is used, high end users don't

[15] DWAF now recognises that "pure business principles do not address the plight of the poor, especially in rural areas", (DWAF,2004j:2).
[16] Wellmer suggests that the introduction of this policy "may have been a political reaction to the outbreak of cholera in August 2000", (Wellmer:2004:13).
[17] It is interesting to note that according to the 2001 census, the average household size was four people, so in effect households are receiving double the basic level of water. DWAF does however recognise that many municipalities question the census figures, (DWAF Senior Specialist Engineer [DWAF-N-1]).
[18] In designing the FBW policy, DWAF consulted other African and developing countries' experiences of introducing a subsidy system but they did not find a "successful role model". Other models failed because the "National Governments were not wealthy enough". In comparison South Africa recognised it was in a financially stronger position and "so could afford Free Basic Services", (DWAF-N-1).

actually get their water for free: they are effectively paying for it through higher tariffs, (DWAF Senior Specialist Engineer [DWAF-N-1]). The reason why there is this room for interpretation is that FBW is a policy and not legislation: "legally[19] the provision of sustainable services is a local government responsibly and free basic water cannot be enforced by national government", (DWAF,2002j:3). The 6 kilolitres is a guideline only: "it needs to be recognised that local authorities should still have some discretion over this amount" (DWAF,2002f:8). DWAF argues it has to be "realistic" in its approach to FBW and recognises that not all municipalities have the capacity or can "afford[20]" to provide 6 kilolitres (so they supply less), whereas the large wealthy metros are in a better position to supply 6 kilolitres of FBW, (DWAF Senior Specialist Engineer [DWAF-N-1]). "If a municipality can't do, they can't do it. National Government has to find ways to help municipalities to supply water at an affordable price[21]", (DWAF-N-1).

DWAF "can't be too prescriptive" in its approach to FBW (DWAF-N-1); rather its aim is to provide the municipalities with enough information for them to make an informed decision over how to implement FBW in their area. The role of DWAF is to provide a support function to local government and to provide flexible guidelines and to monitor and evaluate the implementation of FBW, (DWAF,2002j:5).

DWAF envisages a phased approach to FBW implementation because "it is recognised that some municipalities many not have the capacity to implement the policy to a full extent immediately", (DWAF,2002f:43). This is in line with the progressive realisation clause of the constitution, (DWAF-N-1), (DWAF,2004d). It was envisaged that the larger wealthier municipalities, with a good level of infrastructure in place, would begin implementation immediately[22], (DWAF,2002f:10). DWAF recognises that rural municipalities are in a more

[19] However, the 1997 Act does state that local governments are not allowed to deny the poor access to basic services on the grounds of inability to pay. So there could be some legal recourse to force FBW, though only for the poor. But the Constitution takes into account financial and other constraints which could be used to counter this argument. Further, the Constitution "discourages" Departments taking "legal action against different spheres of government", (DWAF-N-1).

[20] The cost of supplying water varies enormously and this needs to be factored in. A DWAF study found that it costs approximately R100 per Kilolitre to supply water in the Northern Cape (arid part of the country) and only R1.50 in other areas, (DWAF-N-1).

[21] In low density rural settlements DWAF recommends considering yard tanks (refer to booklet, Water Supply Service levels) – consumption can also be measured and tampering is difficult, (DWAF-N-1).

[22] (Durban, Johannesburg and Cape Town) and urban areas benefit from 'scale and accessibility'; it is more cost effective for a municipality to provide water in urban areas than rural areas (which tend to have a higher concentration of the poor). In urban areas municipalities can provide FBW to more people at a lower cost than rural areas (DWAF,2004c).

challenging position vis a vis the large metros and were to be given a longer time frame and higher level of support[23].

Figure 1 below sets out the level of implementation of FBW across the country. It is clear that there is a great deal of disparity between the provinces in terms providing FBW to poor households. In Mpumalanga Province as a whole, only 36% of the poor population are currently served by FBW; this is the lowest in South Africa, but implementation rates do, however, vary by municipality. In Mbombela municipality, according to DWAF figures, 64% of the total population is served by FBW; the figure is 40% of the poor population. In the adjacent Umjindi municipality just 24% of the poor population is served; this level also needs to be viewed in the light that Mbombela has ten times as many indigents (331,682) to serve as Umjindi (35,255). Nkomazi Municpality (adjacent to Mbombela) has yet to implement FBW, explored in Section 5.

Figure 1: Percentage of the Poor Population[24] currently in receipt of Free Basic Water by Province, June 2005. Source: DWAF.

Province	Total Poor Population	Served by FBW	% Served (Total)
Western Cape	1,671,093	1,422,868	85 %
Eastern Cape	5,481,547	2,225,281	41 %
Northern Cape	524,831	397,988	76 %
Free State	1,951,829	1,801,350	92 %
KZN	6,297,337	3,965,046	63 %
North West	2,406,752	1,372,778	57 %
Gauteng	4,055,972	3,646,410	90 %
Mpumalanga	***2,257,622***	***802,027***	***36 %***
Limpopo	4,731,809	2,148,962	45 %
Totals	**29,378,792**	**17,782,710**	**60.5 %**

Fulfilment of the FBW policy requires the measurement or control of the amount of water supplied to households. This does not necessarily mean water meters are the only option

[23] Infrastructure is often not in place (in particular mechanisms to measure consumption) and many have a small tax revenue base, high levels of poverty and are capacity constrained. As a result many rural municipalities have struggled to implement FBW, (DWAF,2002d:3) and specific guidelines for them have been developed, (refer to DWAF (2002d).

[24] Poor Population is defined as "Total national, provincial and municipal population with an income less than R1,000 per month", DWAF.

available: different service level options[25] and technologies (for example yard tanks) can be used to regulate consumption, (DWAF,20002j:4), (DWAF,2002f).

Some confusion exists over whether WSPs are able to cut water supplies if consumers are found to have vandalised or abused the system. Wellmer (224:37) reports that in 2003 the Minister made it an offence to cut supplies. In later documents, DWAF stipulates that constitutionally, and also in terms of the 1997 Act and the 2000 Municipal Systems Act, water is not a 'non-derogable right', in effect allowing disconnection as a last resort. "However let us state up front that this should always be an absolute last resort, preceded by restriction of supply", (DWAF,2004:c).

2.4.2 Financing Free Basic Water

It is now necessary to consider how FBW is financed regardless of whether it has been interpreted as free for all, or free for the poor. The funding of FBW is immensely complicated and essentially there are three sources available: national government transfers, local government through levies and taxes; and cross subsidisation between high users and low users at the local level. (DWAF,2002d:7). Turning first to the national government level, **t**here are three types of subsidies that are transferred to local governments: the Municipal Infrastructure Grants, the Equitable Share transfer and DWAF operating subsidies (DWAF,2004a). The Municipal Infrastructure Grant (MIGs) is only for the provision of RPD standard infrastructure[26]: The MIGs are conditional grants, DWAF can "put pressure" on municipalities to use the funds for basic infrastructure/capital investments, (DWAF National Senior Specialist [DWAF-N-1]).

The Constitution guarantees that local governments receive an equitable division of revenue, i.e. the Equitable Share grant which is designed to supplement local government revenue collection. The Equitable Share is made up of two parts: the 'I-grant' and the 'S-grant', which is the largest component of the ES (about 78% of the ES). The purpose of the 'I-grant' is to help municipalities to maintain basic administration function and put management systems in place. The purpose of the 'S-grant' is to ensure that low-income households receive access to basic municipal services. The formula for this component of the ES is based on the number of households with a monthly expenditure[27] of less than

[25] Studies indicate households who are reliant on communal standpipes, and have to carry their water, consume less than half the FBW recommendation of 6 kilolitres per month – i.e. 2-3 kilolitres (DWAF National Senior Specialist [DWAF-N-1])

[26] i.e. communal standpipe within 200m and VIP sanitation.

[27] DWAF favours expenditure over income as a measure of poverty, this is because there is often a "50% difference….people lie about their income", (DWAF-N-1).

R1,100, (DWAF,2002f:17). The figures are based on census data. However, many municipalities dispute the census data, (DWAF-N-1). The ES[28] has increased substantially since the introduction of free basic services, from R1,867 million in 2000/01 to R2,618 million in 2001/02, to R3,852 in 2002/03. Total transfers to local government, including the ES have risen from R6,5billion in 2001/02 to R8,6billion in 2002/03[29],(DWAF,2002f:17).

As indicated previously DWAF has been operating the supply schemes in the homelands-national government was provided with an operating subsidy for this. The responsibility for these schemes is being transferred over to the relevant local authority, and in the process the operating subsidy will be re-allocated to the ES grant[30]. These increases in the ES should result in an increase in the subsidy level for each poor household and support FBW policy. (DWAF,2002f:18).

It is important to note that the ES is unconditional; this means that there is no mechanism to dictate or force municipalities to allocate the ES towards the provision of basic services, which is a "huge headache", (DWAF National Senior Specialist Engineer [DWAF-N-1]). National government can only provide guidelines over how the Equitable Share should be allocated. This has important implications for the implementation of FBW. DWAF recognises that "[a]t present these subsidies are not well targeted", (DWAF,2002f:19) and estimates that in 2003/4 only about 20% of the 'S-grant' allocation was used nationally for free basic services, (DWAF,2004d) which is "much too little", (DWAF,2004a). DWAF and national government are looking to encourage municipalities to use the ES for its intended purpose. DWAF is set to issue guidelines on how to target low income households[31]. The Treasury Department is also looking to revise the way ES is calculated and allocated. It is now proposed that the ES will be calculated based on the cost of service provision and the capacity of each municipality to raise revenue. This will be a challenge but it will be "a much fairer system", (DWAF,2004a). A new idea is the Equitable Share should "disproportionately

[28] The 'S-grant' allocation guide is as follows: 23.3% towards FBW; 11.6% towards free basic sanitation; 41.9% towards free basic electricity and 23.2% towards free basic refuse collection, (DWAF,2004d). ES must cover the provision of these basic services.
[29] This indicates a slight change of direction and a move back towards a more redistributive agenda.
[30] There are concerns within DWAF over the transfer of the DWAF operated water supply schemes: "It is imperative that municipalities taking over such schemes have appropriate management arrangements in place, including tariff policies to ensure financial sustainability, credit control measures and adequate resources". (DWAF,2002f:19).
[31] There is a recognition that some municipalities struggle to target the ES to the poor because they have insufficient information on low income households in their areas. STATS SA now provides information on infrastructure provision and number of indigents for each municipality. DPLG is drawing up guidelines to help municipalities to identify indigents. DWAF is also developing a checklist to help municipalities to determine how well they are functioning and to help identify areas for concern, (DWAF National Deputy Director: Contract Regulation [DWAF-N-2]).

go to the poorer guys [municipalities]" who do not have options of cross subsidisation and are without income from cross subsidisation. Municipalities who are able to fund FBW, through cross subsidisation, would see their ES reduced (for example Cape Town). This is still being discussed by the Treasury, (DWAF-N-1).

Are national funds adequate to fund the FBW policy, "no, not really" suggests a DWAF official (DWAF-N-1), or are local funds required? The level of the national funding shortfall will partly depends on how the FBW policy has been interpreted. Those that have a universal FBW policy are likely have to supplement it to a great extent from local funds. Overall FBW is financed by a mix of national and locally raised finance and the exact mix depends on the location and circumstances of the municipality.[32]

Turning now to local sources of finance for FBW, there are two main sources of funds. The first is from local taxes and levies. In the case of rural municipalities, where there is little opportunity of cross subsidisation because there are few wealthy residents, the financing of FBW must come from tax revenues or the ES, (DWAF,2002d:7), but this involves an opportunity cost[33]. DWAF suggests that locally raised revenues from cost recovery will be the most important means of financing FBW[34]. A greater degree of cross subsidisation is now possible following the local government demarcations of 2000- which have combined rural and urban municipalities. (DWAF,2002f:19). In municipalities where there is a relatively small urban area and a large rural (poor) 'hinterland' cross subsidisation is possible, but the ratio between wealthy and poor customers has altered significantly and there is a limit as to how much the wealth customers can be charged/ 'squeezed' which could ultimately 'damage the local economy', (DWAF,2002f:20). DWAF provides guidelines/'estimates' of what they think "reasonable tariffs are". They recognise that if tariffs are too high it encourages people "to make illegal connections", (DWAF National Senior Specialist Engineer, [DWAF-N-1]). A DWAF official commented that there "is a limit you can squeeze the middle income man, commerce and industry", (DWAF-N-1).

In 2004 the parliamentary Portfolio Committee recommended that the FBW policy should be "redetermined" to exclude those who can afford it i.e. FBW should be targeted towards the

[32] It is likely that many municipalities do not have a free choice and their financial options are dictated by their circumstances.
[33] 'Each local government must decide how much they can afford to set aside for the provision of FBW. As local govt finances tend to be severely stretched, especially in rural areas, the decision to increase funding to one area of need means cutting down on another area of need, and is thus primarily a political decision' (DWAF,2002d:7).
[34] Historically about 70-75% of water service income has come from user charges (and the rest from grants); however, subsidies are becoming increasingly important, especially for FBW in poorer areas that have a limited cost recovery potential DWAF,2002a).

poor. DWAF suggests there are various ways this can be achieved [35](DWAF-N-1). In response to the committee DWAF clarified that the FBW policy "has in fact already been redetermined to be in line with the indigent policy proposal that recommends three different approaches to FBW in different areas"(i.e. three strategies to target the poor). In metros, and similar municipalities, with 'substantial incomes', and where most households are metered, DWAF recommends that FBW should be supplied to all through a rising block tariff structure[36] which is a form of subsidy because high level consumption is charged more than marginal cost of production ('marginal cost price') to counter-balance the lower-than-marginal cost prices at low consumption levels, (McDonald,2002:18).

In smaller towns where the municipality has a low income, and where it is relatively easy to identify and monitor the poor (e.g. through a municipal indigent policy) and where most consumers are metered, DWAF recommends targeted credits or subsidies for the poor[37]. According to DWAF officials the basic rule is if households "want to be classified as indigent they are meant to be within 6 kilolitres" and "if they go over they are not classified as poor", (DWAF National Senior Specialist Engineer [DWAF-N-1]). In the third scenario, rural areas where the majority of the population is poor and the municipalities are capacity constrained/'weak' and have limited finances and few customers are metered, then FBW through appropriate service levels targeting[38], such as public standpipes, is recommended, (DWAF,2004c).

As indicated the FBW is a flexible policy; local governments have a level of autonomy over how they implement the policy. The WSA can decide to channel the subsidy funds to the WSP (which is the most common model). Alternatively the WSA can transfer the funds directly to the consumer in the form of a monthly allocation on their accounts or in security cheques. The benefit of this model is that users "have clout to enforce" the delivery of FBW, (DWAF National Senior Specialist Engineer [DWAF-N-1]).

[35] Whilst stressing that targeting is just a "recommendation" "there is no policy from the national Government side", (DWAF National Senior Specialist Engineer [DWAF-N-1]).
[36] Rising Block Tariffs: These are applied to all customers, with the first block typically set from 0-6kilotitres with a zero tariff. The blocks have to be steep enough so as to cross subsidise the poor and achieve equity. The advantage of this system is that the WSP does not have to identify and monitor poor households, which is a huge administrative burden.
[37] Targeted Credits or Subsidies: In this case each customer who is selected for poverty relief receives a credit on their water account which would typically be sufficient to cover the charge for the poverty relief amount.
[38] Service Level Targeting: Those service levels which provide a restricted flow (below the poverty relief consumption level) are provided at no charge. Those with higher levels of service pay the normal tariffs, with the possibility of applying credits in exceptional cases, (DWAF,2004d).

The subsidy approaches selected by a range of different municipalities across South Africa is shown in Appendix 2[39].

2.5 Questions of Affordability

With the 1994 landslide victory for the ANC, the justification for a rates boycott ceased, but payment levels remained low. The government initiated "Operation Masakhane" ("Let's build together") which campaigned to encourage residents to act responsibly and pay for services, (McDonald and Pape,2002:1-2). Despite Operation Masakhane payment levels for municipal services remained low across South Africa, as reported in work by Ruiters (2002), Xali (2002) and McDonald (2002). All the contributors to the Cost Recovery Crisis collection are adamant that affordability is the explanation for low rates of payment. The question emerges -*Was affordability, as McDonald and Pape argue, the sole reason behind the low levels of cost recovery before FBW, or are there other explanations?* Research by this writer and others for example Ruiters[40] and McDonald[41], provide evidence that affordability i.e. inability to pay, is certainly a valid explanation for much of the low payment. As indicated, the introduction of the FBW subsidy was in recognition of the fact that affordability was a real issue in South Africa: "The underlying reality is that many of our people do not have access to clean, safe water, simply because they cannot afford to pay for it", (DWAF,2002j). However, work carried out by this researcher and others indicates "the reasons for non-payment are complex", (Smith et al,2004:4), and genuine inability to pay is only one of them. This is not to underestimate the importance of the affordability argument, rather to demonstrate it is not the sole explanation.

McDonald and Pape (2002) dismiss the existence of a 'culture of non-payment' as an explanation for the failure to pay service bills. This writer argues that a culture of non-

39 This illustrates that different municipalities with varying circumstances have implemented different subsidy systems.

40 In the case study of water service provision in the three towns of Fort Beaufort, Queenstown and Stutterhiem in the Eastern Cape, Ruiters reports that 90% of the residents in the townships had monthly household incomes of under R600 and 50% of the residents were unemployed. Following the privatisation of water services in these towns water bills increased by 300%. Payment levels in the white high income suburbs was over 90% in all three towns whereas in the township areas around 30% of residents paid their bills and in some areas, cost recovery was as low as 12-15%. Ruiters argues that affordability lies at the heart of issue.

41 In 2001 the Human Sciences Research Council commissioned a survey looking at the issue of service delivery across South Africa. 2,530 randomly selected adult South Africans were surveyed. DWAF is particularly critical of McDonald's extrapolation and interpretation of the results of the survey but nevertheless the results provide an insight into the issue of affordability. 57% of the sample resided in households where the total monthly income was under R1,000. Further, 17% of the respondents said they were only able to pay their municipal bills "if they cut back on other essential goods like food and clothing" and another 18% of the sample said they were unable to pay for services "no matter how hard they try", (McDonald,2002:166). If this is applied to the national population this accounts for a significant proportion of South Africans.

payment is not simply a legacy of the rates boycott, though this is still within living memory; it is made up of many contributing factors which have resulted in an environment where it is the norm not to pay service bills, regardless of ability to pay. There is evidence these factors do exist, and they may be socio-economic (lack of experience in prioritising, budgeting and managing household finances – a legacy of the deeply ingrained combined flat rate system), ideological (anti-privatisation sentiment), political (miscommunication of the FBW policy and a lack of political will to enforce cost recovery) as well as grievances (inability to understand meters or bills). Understanding low rates of payment before FBW (and post FBW) is complex, and not as McDonald and Pape argue a simple choice between affordability and a one-dimensional definition of a culture of non-payment.

The second important theme that needs to be investigated is the *impact of the introduction of FBW on cost recovery levels and whether as a result of the FBW subsidy, affordability is still an issue.* It is only meaningful to investigate this where FBW has been applied in line with government policy (as indicated, levels of implementation vary). Mbombela provides the opportunity to investigate whether affordability was an issue before FBW and what the consequences of the subsidy have been with regards to affordability.

Before we turn to the case study it is worth noting that any discusssion in South Africa on affordability is difficult because according to DWAF, "[t]here is no commonly defined definition of poverty in South Africa", DWAF,2002f:8. Each local authority sets its own poverty threshold. There is also a debate over whether household income (often difficult to assess because of the informal sector) is more reliable than household expenditure. DWAF is in favour of defining poverty in terms of household expenditure[42] (R1100 a month), (DWAF,2002f:8). Even where a poverty line is set, an added difficulty is that for low income groups ability to pay for water services is constantly fluctuating[43] because employment is often seasonal or temporary and household composition changes as family members move in or out of a household and as a result incomes can alter quite radically. This means it is difficult for authorities and WSPs to track household affordability. There is also a need to recognise that affordability is an emotive term that can mask a range of household situations. Affordability needs to be broken down into those whose income is so prohibitively low that paying for water is an impossibility (the originally intended beneficiaries of FBW) and those for whom 'opportunity cost' is an issue. For this group, the

[42] That said, there are inconsistencies within DWAF documents: the definition of poor households used by DWAF in their monitoring of FBW implementation, refer to Figure 1, is R 1,000.
[43] The census provides a snap shot of a household's income status at that particular time, but may radically alter upwards or downwards (above or below the poverty line) in a short space of time.

household income may not be sufficient to pay for all municipal services as well as other services (mobile phones[44], the running of a private motor vehicle or satellite television). This household has to prioritise its expenditure and may decide to pay for those services which are prepaid first, for example mobile phones or electricity, whereas for those services such as water, where there is already a high level of non payment in the area, payment may be seen as a lower priority. There is therefore a need to differentiate between those that really cannot afford to pay for water from those that prioritise luxury services above payment for water. These issues will be raised again in section 3.4 that explores reasons for non payment.

3. WATER SERVICE PROVISION IN THE NELSPRUIT GNUC CONCESSION AREA

3.1 Background

Roughly half of the municipality of Mbombela has its water needs supplied by the private water company Greater Nelspruit Water Company (GNUC): for the rest of the area Mbombela municipality is the WSP. It is useful to trace the emergence of this dual system, and to do so necessitates an awareness of the situation during the apartheid era.

In the white town of Nelspruit, residents enjoyed a high level of service and infrastructure was well maintained by the council. Outside the town, Smith et al (2004:8) suggest that homeland governments "installed high levels of infrastructure" with regional supply lines in place during the apartheid era, but it is important to differentiate between the more formalised townships (for example Ka Nyamazane and Matsulu) – which benefited from this injection of funds and had yard taps and water borne sanitation, and the denser settlements in the trust areas (former homelands), where water provision was minimal or non-existent. For example residents of Daantji (trust areas – population 120,000) often resided up to 1 km away from a commercial stand pipe[45]. Location pays a big role in accounting for differential water service levels: undulating relief is not conducive to laying pipe work, and road access was frequently poor in the trust areas. Issues of topography and access are still

[44] The running of a mobile phone could in some lights be viewed as being a luxury item but it may actually be more cost effective for a household to run a mobile phone (not on contract) than land line standard costs. Several of those households interviewed actually had several mobile phones, which does to some extent counter the previous argument, particularly when many of the younger householders were keen to demonstrate they had the latest mobile handsets, (the author's own was viewed with mirth as being something of a dinosaur!).
[45] Reference: The Nelspruit Concession, Putting the Record Straight, 2003:3.

relevant today. Infrastructure suffered from lack of maintenance and illegal connections[46], (Wellmer,2004:26), which did not promote the equitable distribution of water: households situated at higher levels were denied their entitlement because it was being siphoned off lower down.

Following the democratic elections of 1994, municipal boundary changes meant the relatively prosperous Nelspruit was amalgamated with outlying townships and densely populated trust areas, increasing the population from 22,000 to 235,000, (Kotze et al,2000:61), and the responsibility of the new Nelspruit Transitional Local Council mushroomed. The water and sanitation services that were transferred to the new council were dilapidated and there were huge capital backlogs. Many of the newly incorporated areas had never received water and sanitation services: there was a marked difference between the level of service in Nelspruit, the townships and the trust areas especially. The trust areas needed to reach a basic level of service provision i.e. communal standpipes within 200m of each house. Where infrastructure existed, supply was frequently interrupted with burst mains and it was estimated that over half the water put into supply seeped away.

No properly established cost recovery system was in place in the new areas transferred to Nelspruit TLC[47]. The council had not the resources to tackle the backlogs in infrastructure provision to raise the level of service in the township and in the trust areas. Estimates vary as to the infrastructure backlog: R400 million to R250 million (Smith et al reporting Development Bank of South Africa). Nelspruit TLC's capital budget , only a third of which was set aside for water services (R8.5 million) was "woefully inadequate to meet service needs", (Smith et al 2004:9).

The population of the Nelspruit TLC rose by a factor of 10, but revenue generated by taxation increased by a mere 38%. This is because of the high level of unemployment in the black townships and trust areas (refer to Figure 2) and the low earnings of those in employment. According to the 1996 census 40% of households in the Nelspruit TLC area had incomes below the poverty line of R800 (R6,000 pa), and 60% lived on incomes of R12,000 or less. The income gap between Nelspruit and township dwellers was marked. The council did not inherit a strong income base with the additional obligations.

[46] Colossal wastage and leakage of a scarce resource was resulting from incompetent tampering with the supply lines in indiscriminate illegal connections. This is also a current issue both within the GNUC concession area and in surrounding areas and is discussed in section 4.3

[47] GNUC document: "The Nelspruit Concession",2001:1.

Nelspruit, which had no experience of supplying water to townships and trust areas – found itself in the position of having high investment needs, difficulty accessing capital markets and low levels of cost recovery in the areas that required the investment. It was recognised that "radical change" was needed to stem further decline, (Kotze et al2002:2), and "a new innovative approach was needed to make universal service coverage a reality", (Smith,2004:9). A period of drought and water shortages compounded the pressure to do something.

Figure 2: Unemployment Levels by Location

Location	% Unemployed
Old Nelspruit	3.41
Ka Nyamazane (township)	30.86
Matsulu (township)	36.31
Daantjie (trust area)	33.15
Luphisi (trust area)	31.78
Mpakeni (trust area)	31.23
Msogwaba (trust area)	34.48

Source: quoted in Smith et al and based on the research findings of A. Gillet

At this time, national government was advocating free market principles and the benefits of private sector participation. Entering a long-term concession arrangement was an attractive option to Nelspruit TLC, since it combined experienced management with capital investment, having an incentive to increase payment levels to meet the terms of the contract and to make a profit for shareholders. Private sector concessionaires are often better placed to borrow money because they tend to have "strong balance sheets that are completely separate from the municipality in question"[48], (Kotze et al, 2000:63).

The basic principles of the concession, including the monitoring of the concession, and an in-depth account of the tendering process are set out in Appendix 3. October 1997 saw the conclusion of the negotiations with the British Company BiWater (the parent company of GNUC), but a further two years elapsed before the 30 year contract was signed. Trade Unions were fiercely opposed to the contract; both the Smith et al and Wellmer reports cover this in detail.

[48] Nelpsruit was not the first to use a concession: Dolphin Coast signed up to one just before Nelspruit. Durban signed a 20 year agreement with a French company for construction and operation of a water purification plant, (Kotze et al,2000).

Private banks were wary of the implications of the 1997 Water Services Act which bestowed on the Minister powers which could put their investments at risk[49]. Without the intervention of the state-owned Development Bank of South Africa (the lender of last resort), the project might have stalled indefinitely. Ultimately the South African tax payer has provided 80% of the finance for the capital investment through the DBSA – made available to GNUC in the second half of 2000, (Wellmer,2004:27).

It is important to emphasise that the Nelspruit concession is not privatisation: all fixed assets remain the property of the municipality. GNUC will return the assets in a specified condition at the end of the 30 year contract. None of the assets can be sold without permission of the municipality, (Kotze et al,2000:64).

GNUC envisaged an 18% return on its investment over the 30 year concession. An important consideration of the contract was that tariff levels could not be increased because they were not meeting their profit expectations. All the financial risk lay with the concessionaire and the municipality stated in the negotiation stages that it would not bail out GNUC with state funds nor sanction tariff increases. (Wellmer,2004:22). The question arises as to whether the concessionaire could abandon the contract if the financial situation proved untenable (as of March 2005 GNUC debt is R 40 million, according to the GNUC General Manager [GNUC-1]). Smith et al 2004 put forward the hypothesis that if it could be proved that an unforeseen external situation had arisen which had altered the business environment so as to jeopardise operations, the GNUC could back out of their obligations. The introduction of FBW after the contract was made could constitute such a situation. The liability would then pass to the municipality. This may explain recent municipal leniency in permitting tariff increases at the time of FBW introduction and subsequently.

Boundary changes followed the December 2000 local government elections: Nelspruit TLC became Mbombela, incorporating a greatly increased area for which the municipality took responsibility for water provision. Thus half the municipality is supplied by GNUC, the rest by Mbombela affording interesting opportunities for comparisons, which are made in section 4.

To provide context, the number of stands (i.e. properties) in the Nelspruit Concession Area (Nelpruit, the townships and trust areas) in 2004 are set out below. Newer, informal

[49] The regulatory powers of DWAF with regards to water quality and pricing may deter the commercial banking sector from such high-risk investment. The regulatory environment in South Africa may well be prohibitive to comprehensive private sector investment.

settlements are found around the fringes of the townships and levels of service are below those found in the townships proper.

Figure 3: Number of Stands per Settlement Type in the GNUC Concession Area in 2004

Settlement	**Number of Stands (properties)**
Nelspruit	
Formal	7,782
Tekwane Township	
Formal	2,000
Ka Nyamazane Township	
Formal	6,200
Informal	*2,000*
Matsulu East Township	
Formal	6,780
Informal	*1,100*
Matsulu West Township	
Formal	2,000
Informal	*600*
Trust Areas (peri-urban)	
Informal	*24,100*
Total	**52,562**

Source: Stewart Gibson & Associates, using GNUC figures.

A historical perspective has been adopted to review water service provision, cost recovery and credit control measures in the GNUC area.

3.2 Pre Free Basic Water: 1999 – December 2001

Nelspruit TLC included a pro-poor clause in the GNUC contract so as to address equity issues. A voucher system was established. The voucher system was a targeted, means-tested[50] subsidy, to assist households below the poverty line (R800 per month). The council purchased vouchers from GNCU (up to R2 million per annum) and these were distributed to needy households to pay for water and sanitation services provided by GNUC. Wellmer (2002:24) reports that the vouchers entitled the user to 19KL a month of water and pensioners were meant to be automatically entitled to the vouchers.

[50] A geographical style targeting approach is not really appropriate in the townships because there is a diverse mix of households. Luxurious two storey dwellings reside next to two room basic dwellings. There is no clear-cut geography of poverty.

This formal subsidy was financed by the council using a portion of its Equitable Share. The system was supported by GNUC because it gave them access to national grants to subsidise their operations and reduce the risk of investing in the townships, (Wellmer,2004:24). Kotze et al suggest that without such government grants it was inevitable that tariffs would soar and "ultimately make concession contracts prohibitively expensive for municipalities",(Kotze et al, 2000:63). It was suggested that "these grants [Equitable Share] will help to keep tariffs at affordable levels[51]", (Kotze, 2000:63).

Turning now to the issues of accessibility to water services, during the first two years of The onus to prove indigent status fell on the consumer and registration was necessary. There is evidence there were substantial errors of exclusion with this subsidy. Home visits and assessments, travel costs to Nelpsruit, and a certain level of shame were involved. One interviewee suggested it was "not manly". Delays and being left in a state of uncertainty about eligibility were all factors accounting for the low up-take: just 17% of poor households applied for the vouchers when 20,000 households were thought to be eligible according to the 1996 census. A publicity campaign resulted in 51% take up of vouchers (Wellmer,2002:24) but no information is available as to distribution – whether townships or rural areas received most of the vouchers. No evidence was collected to show there were errors of inclusion, but households could hover above or under the cut-off point for indigent status (seasonal/temporary work or a death and loss of pension/earnings). Only regular means testing could keep abreast of the unstable incomes of the poor. Due to the means testing component, the voucher system resulted in significant administrative costs to both the municipality and GNUC. The system was cumbersome and unmanageable: "means testing was a huge administrative burden", (Mbomblea Municipality Deputy Town Manager [MM-1], GNUC Public Relations Manager [GNUC-2). When the FBW policy was announced the Nelpruit TLC thought "this is a good system, so that everyone gets the basic 6,000 litres, irrespective of income", (interview with R. Kotze, Wellmer,2004:25).

The voucher system was replaced with the introduction of FBW in January 2002, but valuable lessons can be learnt from its shortcomings especially in view of current thinking about a return to a targeted credits subsidy system (refer to section 4.5).

GNUC operations, "the main thrust of the capital work has been to expand and improve services in the townships and rural areas". The achievements of GNUC are set out in Appendix B. These capital investments brought "a substantial upgrading in the water supply

[51] The issue of affordability is explored in section 3.4.

for township residents", (Wellmer,2004:35): the concession appeared to be meeting targets for improving access to water[52].

The tariff system that came into operation with GNUC is set out below. It is a rising block tariff because cross subsidisation was always intended to be the main source of finance. Billing is monthly[53], but a bill may refer to consumption that took place two months previously. This is related to the cycle of meter reading and the processing of bills and their delivery, (GNUC General Manager [GNUC-1]).

Figure 4: Tariff for Water Services in 1999 (source: GNUC).

Consumption in 1,000 litres	**Tariff per 1,000 litres (excluding VAT**
0-6 thousand litres	R 1.26
7-30 thousand litres	R 1.82
31-100 thousand litres	R 2.03
Above 100 Kilo litres	R 2.20

Residents in the rural trust areas such as Daantji and Msogwaba were not billed for water services because without meters (or yard tanks) there was no question of cost recovery. Non-billing is evidence of an informal subsidy. The level of service was still that of communal standpipes, although distances to standpipes had been reduced as a result of GNUC's investment programme. Cost recovery is still not being pursued in the trust areas[54].

Payment levels were considerably lower than GNUC expected in the townships where users were subject to the tariff system set out above. Cost recovery in the townships was 38% in July 2001 and this fell to 27% by December 2001[55]. Lower than expected costs recovery levels led GNUC to adopt credit control measures which were in keeping with the terms of the contract. After warnings, water was cut off, but restored if payment (or part payment) was made. Persistent non-payment led to the removal of pipe work. Around 6,000 newly installed meters were removed from the townships[56]; this indicates the scale of infrastructure removals.

[52] It should, however, be noted that "different technologies" – i.e different levels of service – are offered to different consumers according to income level, zone and topography: undulating countryside is an issue in townships and particularly in trust areas.
[53] Bills are predictable in terms of timing; however two Tekwane South residents claim that they had not received a bill since June 2004.
[54] This is also the case for the trust areas outside the GNUC concession areas, as will be outlined in section 4.
[55] The imminent introduction of FBW was likely to be a contributory factor to the falling payment rates.
[56] According to a Mbombela commissioned consultancy report there are 16,980 formal (ie with a meter) stands in the GNUC concession area: just under a third of these meters were removed. The total

These rather punitive credit control measures resulted in a backlash and people resorted to illegal connections/reconnections. Disconnections during the cholera epidemic of 2000 did not enhance GNUC's reputation: "one needed the sensitivity of a crocodile to arrive at such timing", (Wellmer,2004:79). The result was a backlash that resulted in even lower payment of bills; a campaign against GNUC was organised by PAC[57], for the course of which water service workers and councillors who supported the credit control measures were intimidated, and illegal connections soared. A petition was also started to terminate the GNUC contract, (Wellmer,2004:32) .

3.3 Free Basic Water – January 2002 to date

Mbombela was one of the first municipalities to implement the government recommendation with 6KL per month of free water per household regardless of income. With an extra 6KL for sanitation, it was one of the first municipalities to introduce this extra benefit. Mbombela took the decision to make FBW universal: all residents were entitled to the subsidy. This had the benefit of reducing administrative costs associated with the means-tested voucher system. A universal system also removed the stigma of applying for vouchers. FBW was initiated in January 2002.

In October 2001, GNUC, the municipality and DBSA met to discuss the implications of FBW for the concession. GNUC foresaw a loss in its revenue (estimated to be R7.39 million) and feared the introduction would derail its cost recovery efforts in the townships, which were already a cause for concern and could lead to the notion that "water did not generally need to be paid for at all". GNUC wanted the following concessions, on the grounds that FBW was introduced after the contract: tariff increases in two stages (10% in January 2002 and a further 10% in July 2002) and credit control enforcement (although cutting supplies was no longer an option). The FBW subsidy was to be financed partly through national funds; the council provided a portion of the Equitable Share to GNUC, and the shortfall was to be met through cross subsidisation.

GNUC successfully argued for tariff increases to compensate for the introduction of FBW. A 10% increase occurred in January 2002 and a further 10% in July 2002. Annual increases also occur to coincide with each new financial year (1July). The tariff structure in operation in 2003 is set out below. Questions over whether the blocks were steep enough to ensure

[57] Operation Vulamanzi (Open the Water) was a campaign to restore connections to those who had their supplies cut or infrastructure removed. Out of work plumbers were encouraged by the PAC to help, (Wellmer,2004:32).

equity and the impact of these tariff increases on the affordability of water services is discussed in depth in the following section.

Figure 5: GNUC Tariff Rates[58] for Water Consumption in July 2003 Source: GNUC

Consumption in 1,000 litres	Tariff per 1,000 litres (excluding VAT)	
	Low pressure zone	High Pressure zone
0-6,000 litres per month	Free	Free
7-30,000 litres	R 2.94	R3.40
31-100,000 litres	R 3.23	3.53
Above 100 Kilo litres	R 4.41	R 3.75

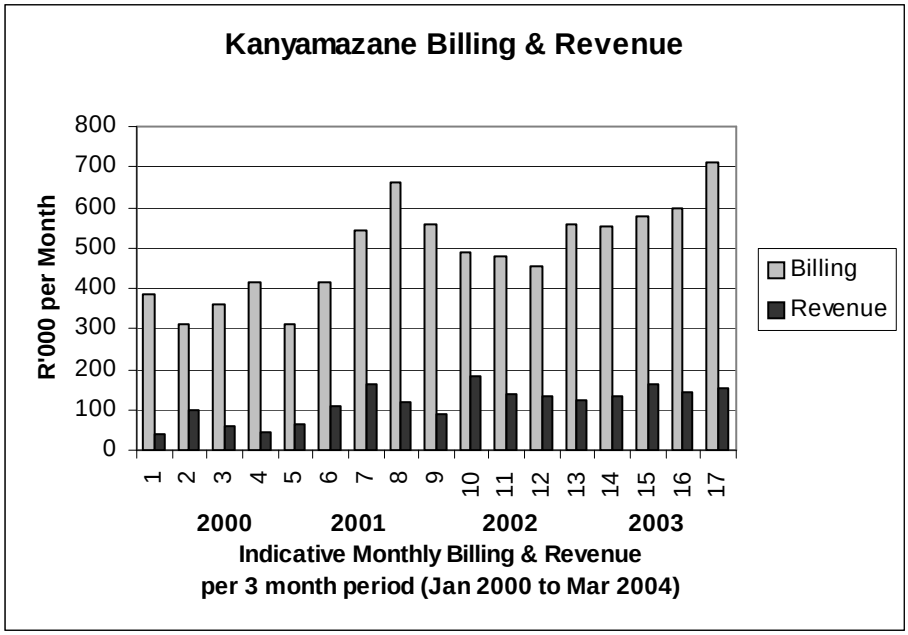
Despite the introduction of the FBW allowance, cost recovery in the townships remains low, as is illustrated in the graphs below. The cost recovery from Nelspruit has remained in the "high 90%s", (GNUC General Manager [GNUC-1]).

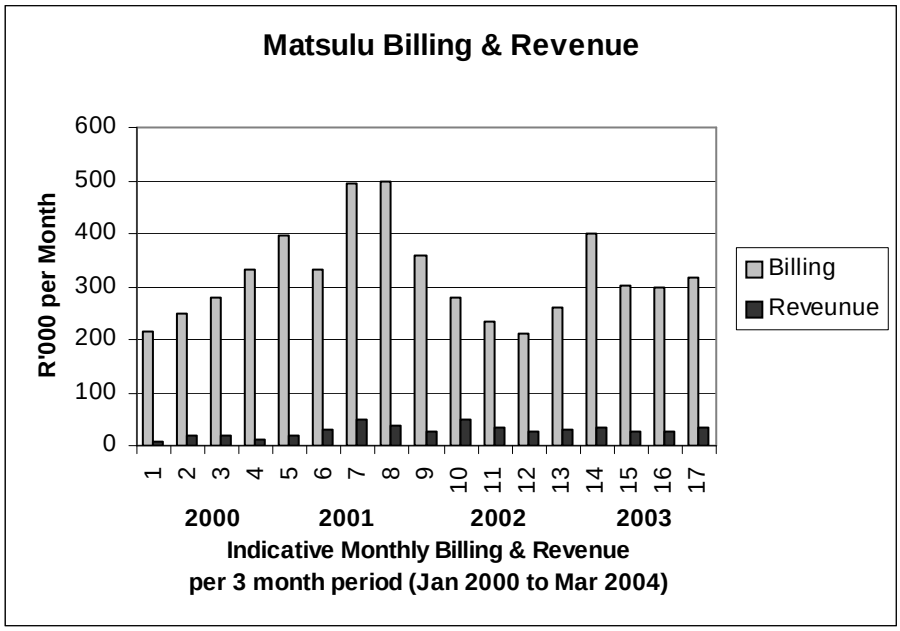
Currently (early 2005) GNUC bill Ka Nyamazane R700,000 but collect only R150,000 (21% cost recovery). The situation is worse in Matsulu where R500,000 is billed but just R50,000 (10%) is recovered, (GNUC General Manager [GNUC-1]).

The level of billing per settlement type is set out in Figure 7. What is startling is the low level of billing in the concession area. There are few metered connections in the informal settlements around the townships and in the trust area, but even in formalised township areas billing is not 100%. In Matsulu East just 33% of properties are billed and no residents in Matsulu West are billed (partly because their supplies are interrupted). Stewart Gibson and Associates, in their review of the GNCU Concession for Mbombela Municipality, express a concern that only 16,000 properties out of 29,000 with a connection are currently being billed, (2004:8). Half of this 16,000 represents Nelspruit – i.e. just 8,000 households are billed in the area outside Nelspruit. Stewart Gibson and Associates advocate increased billing levels as a means to generate revenue.

[58] GNUC now differentiates between low and high pressure zones. Connection fees also come at a higher cost in higher pressure zones R159 (low zones) versus R483 (high pressure zone). No discount was available for poor households who did not have a choice over which zone they lived in. McDonald and Pape (2002:28) comment that steeper block increases are needed if they are going to have an impact on equity.

Figure 6: Difference between Billing and Revenue Collection in the Three Townships in the GNUC Concession Area (Source "Evaluation of the Performance of the GNUC for the Period 1999-2004" for Mbombela Municipality)





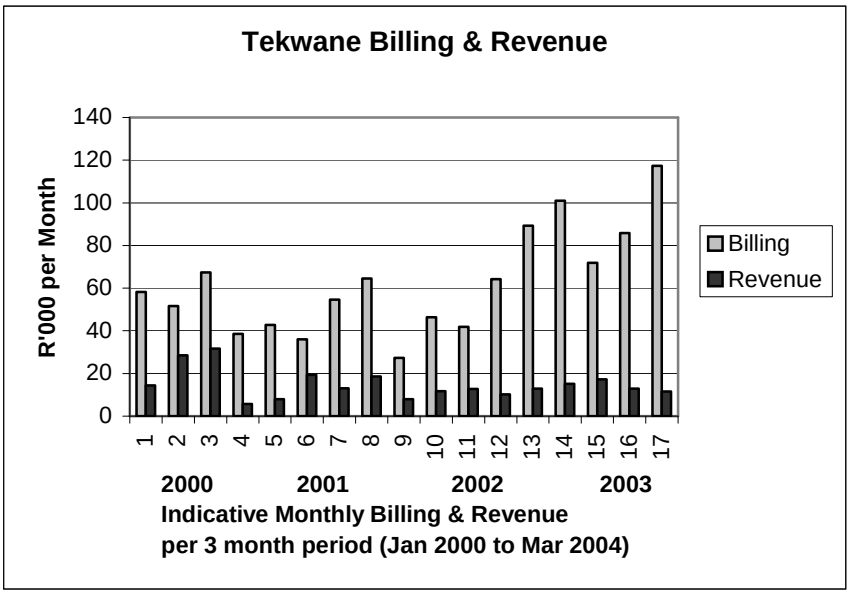


Figure 7: Number of Stands per Settlement Type in the GNUC Concession Area and Billing levels in 2004

Settlement	**Number of Stands (properties)**	**Number Billed**	**Percentage Billed**
Nelspruit			
Formal	7,782	7,782	100%
Tekwane Township			
Formal	2,000	1,600	80%
Ka Nyamazane Township			
Formal	6,200	4,650	75%
Informal	2,000	0	0%
Matsulu East Township			
Formal	6,780	2,270	33%
Informal	1,100	0	0%
Matsulu West Township			
Formal	2,000	0	0%
Informal	600	0	0%
Trust Areas (peri-urban)			
Informal	24,100	0	0%
Total	**52,562**	**16,302**	**31%**

Source: Stewart Gibson & Associates, using GNUC figures.

Despite the tariff increases, revenue losses (due to non-payment in the townships and the universal FBW policy) continued and were not offset by savings in administrative costs or the Equitable Share. GNUC receives "roughly 50% of the Equitable Grant" though GNUC's General Manager "suspects they [the Municipality outside the concession area] have more indigents than we do" (GNUC-1). For the current financial year (2004-05) GNUC received R3.5 million from Mbombela as its portion of the Equitable Share[59]. The Equitable Share is "cash in place of tariffs" but the "Equitable Share went nowhere near to cover FBW" because "we lost revenue from everyone", (GNUC-1). The Equitable Share is not being used to cross subsidise the middle classes in Nelspruit, (Mbombela Municipality Deputy Town Manager [MM-1]).

In fact it is the middle classes and businesses who are helping to fund the shortfall: "all the cash comes out of Nelpsruit", (GNUC General Manager [GNUC-1]). Businesses are subject to a higher tariff, and thus can be said to be subsiding FBW. However, a small enterprise could in effect be subsidising FBW enjoyed by higher income groups. Nelpruit middle-class residents – according to the DA Councillor representing the main residential ward – "are being shafted" (reported in Wellmer,2004:34): as Mbombela rate- payers, they are cross subsiding water for both the concession area and indirectly (through rates and taxes) funding water supply outside the GNUC area. 30,000 people are being taxed to provide basic services for over 600,000. In the past the DA has supported the GNUC but it now feels that the tariff increases (another 15% increase as of 1 January 2005) is too much: "a particularly pernicious increase" that is "huge and cumulative". The DA did not approve of the latest tariff increase that the ANC majority council approved: "their constituents do not pay", (Mbombela Municipality DA Councillor [MM-C2]). But if fairness is the issue, it is important to consider how the white population has benefited from highly subsidised water for a generation, but the low-income black populations (and unemployment is increasing at 6% per annum) are now subject to market forces and are expected to pay the true cost of connections, (TRAC-1). There is a ceiling to tariff increases and GNUC recognises "the key is not to over tax Nelspruit" (GNUC-1) but there seems to be a feeling that tariffs could be increased yet further because tariffs in the nearby town of White River (supplied by Mbombela) have higher tariffs (refer to section 4).

Cost recovery had reached such low levels in early 2003 that GNUC threatened to pull out of the concession without some relief measures. The council agreed to 4 relief measures: a

[59] The contribution from the Equitable Share in 2005-2006 will be R3.6 Million, in 2006-2007 it will be R3.9 Million and R4.2 Million in 2007-2008, (GNUC-1).

reduction in their electricity bill of R800 pa; an increase in the Equitable Share allocation; a reduction in the monitoring fee (from R1.25 to R750,000) and the fee for the rental of municipal property was reduced from R10.6 million p.a. to R6.6 million, (Wellmer,2004:39). GNUC had also placed a moratorium on further capital expenditure so the upgrading programme was stalled. As a result overall access to services in terms of infrastructure had not radically changed from 2001.

Rather than generating an 18% return on investment, as predicted, GNUC has accumulated[60] substantial debts, currently (2005) R40 million (GNUC-1). Debt levels of GNUC continue to increase. As part of the 5 year concession review, GNUC's tariffs have been renegotiated, and as indicated this equates to another 15% increase. All tariff increases have to be approved by the council. The current GNUC tariffs are set out below.

Figure 8: GNUC Domestic Water and Sanitation Charges[61] 1 January 2005
(Source: GNUC)

WATER TARIFFS
Fixed charge for consumption exceeding 6 kl/month
R20.00

Variable charge per Kilolitre

Up to 12 Kl	No Charge
12Kl up to 20Kl	R4.40 per Kl
20Kl up to 40Kl	R4.60 per Kl
40Kl up to 150Kl	R4.70 per Kl
Over 150Kl	R4.80 per Kl

SANITATION TARIFFS
Fixed charge for consumption exceeding 6 kl/month
R20.00

Variable charge per Kilolitre

Up to 12 Kl	No Charge
12Kl up to 20Kl	R4.80 per Kl
20Kl up to 40Kl	R5.10 per Kl

[60] Debt in January 2002 was R17 million. This had grown to R30 million by August 2003, (Wellmer,2004).
[61] These charges are exclusive of VAT, which is currently 14%.

Figure 9: Other Water Charges[62] (Source: GNUC)

New Customers		
Connection Fee		R40.00
New water connection		Cost plus 25%
Deposits	Domestic Low pressure	R200.00
Domestic High pressure	R600.00	
Existing Customers		
Final Reminder		R50.00
Reconnection Fee		R140.00
Special Reading of a meter		No charge
Meter Reading	If meter found to be faulty	No charge
If meter found to be correct	R500.00	
Water Pressure Test		R125.00
OTHER CHARGES SANITATION		
New Customers		
New Sewer Connection		Cost plus 40%
Existing Customers		
Removal of Blockages	Between 7 to 17 week days	R240.00 per hour
After working hours	R300.00 per hour	

As indicated in section 2.4, there appears to be some confusion over credit control measures in the post FBW era. According to GNUC they are "not allowed to cut supplies because it is not constitutional" (they are only allowed to cut supplies to businesses), (GNUC General Manager [GNUC-1]). This led GNUC to introduce new credit control measures that allowed them to comply with the FBW policy but still allowed them to exert credit control. GNUC lowered the water pressure and had tricklers/restrictors (perforated disks) which reduce water flow to a drip. The tricklers allowed 200 litres of water to be supplied to each household that was in arrears. However, due to the topography, Wellmer reports that those households living in elevated locations often did not receive any water because the pressure was too low, (Wellmer,2004:37) . This strategy has largely proved unsuccessful because residents resorted to tampering with the pipes to remove the tricklers, (GNUC Town Manager KaNyamazane [GNUC-4], and GNUC Town Manager Matsulu [GNUC-5]). GNUC tried to prosecute those who had been caught but there were no by-laws in place to allow this, (GNUC Customer Services Manager [GNUC-3]), (Weller,2004:37). In 2003/4 GNUC initiated the "Ka Nyamazane 500" project: 500 government employees who owned properties were "targeted to provide a good example". Legal action was taken, but the

[62] These are important because this could mount up and be a huge burden on the poorest segment of society

"wheels of justice grind slowly" and only one property was sold. 11 households however "came forward to pay". The strategy "sent shock waves" (GNUC-3) though the community, but it also caused embarrassment to GNUC because some of those identified were later proven indigent. Credit control measure proved unsuccessful: cut-offs resulted in illegal connections and the restricting devices have resulted in tampering with the network. At the time of fieldwork the GNUC Customer Services Manager reported with regards to credit control measures in the townships "we have abandoned this": the use of restrictors was "a waste of money and time" because they had to employ contractors to check that they had not been removed and felt the "contractors were beginning to rip us off" because they were colluding with the residents, (GNUC-3). In Nelspruit by comparison credit control measures were still being used against households who defaulted on their payments. The numbers involved are miniscule compared with the townships, (GNUC General Manager [GNUC-1]). GNUC is currently developing a new multi-pronged approach to credit control which will be discussed in the following section.

The most significant challenge facing GNUC is low levels of payment for water services in the townships. Payment levels have fallen since the introduction of the FBW policy and stricter credit controls. A full discussion of the causes of low levels of payment now follows. It warrants its own section/discussion because it has implications for the viability of GNUC and because the reasons are relevant to the discussion of the area outside the GNUC concession).

3.4: Discussion: Exploring Non-Payment

Before exploring the reasons for the current low levels of payment in the townships in the GNUC concession area, it would be helpful to investigate, albeit briefly, whether affordability was an issue before FBW.

In the period immediately preceding the end of apartheid and before the concession contract was awarded to GNUC (1994-1997), there were low levels of payment in the townships: was affordability an issue at this time? The bills which residents received were a flat rate combining all municipal services and were heavily subsidised. Consumers were not asked to pay a realistic price, nor were they aware of the cost of an individual component of the bill such as water: residents got "used to not paying the actual costs", (GNUC Customer Services Manager [GNUC-3]). It should be noted that all the residents interviewed commented that they would like a return to the flat rate system because it was simple and

affordable: "I think the municipality should supply water…everyone will pay….it will be a flat rate like under apartheid", (KaNY-1) others agree (Mat-3, KaNy-2, Mat-2). If non-payment was a significant issue at this time it appears likely that it stems from the legacy of the boycotting era towards the end of apartheid. In the early days of democracy it is reasonable to assume the habit continued. Despite this all those interviewed maintained they used to pay their municipal bills at this time: "I have been paying regularly since 1981" said one Matsulu pensioner (Mat-2).

The continued low cost recovery in the townships combined with the high levels of unemployment and low incomes were factors which induced the then Nelpsruit TLC to look into PSP as a means of accessing capital. Teaming up with a private company meant that a more realistic/truer cost for water services would have to be met by all consumers especially in the light of national government's commitment to fuller cost recovery. This inevitably meant that affordability was likely to be an issue: within the community there would exist an element too poor to pay without some level of subsidisation. Indeed before FBW, Nelspruit TLC was not pursuing a strictly orthodox cost recovery model and questions of equity were given consideration. The previous section outlined the voucher system (formal subsidy system) that was established as part of the concession agreement. It is thought that at least 50% of those eligible for vouchers (i.e. 10,000 plus households), even after a publicity campaign did not receive their entitlement, i.e. serious errors of exclusion existed. When considering the low levels of cost recovery that GNUC experienced in its first 2 years of operation (27% in the townships by December 2000) it is highly probable that the excluded indigents accounted for a large proportion of these numbers. In the GNUC era, residents also had to pay a connection charge (R.18.55) and a deposit (R55.00) as well as a monthly charge of R11.25 (Wellmer,2004:24), these made substantial inroads into low income household resources. It is not clear whether the voucher system provided any relief over these charges. Regardless, it is during this period that consumer debt began to accumulate – this is a very real problem at the present time. For many these debts were accumulating on top of those accrued during the boycott era[63]. A number of those interviewed stated that they paid their first GNUC bill, but as it was so high they decided they could not afford to

[63] One relief measure introduced by GBUC to help indebted consumers is to split their bills into pre and post FBW. For debts accumulated before FBW they no longer charge interest. This is an informal subsidy as well as gesture to alleviate financial difficulties. GNUC officials also report that the company has written off considerable amounts of township debts (GNUC General Manager [GNUC-1]) but GNUC "cannot keep writing off debt" . Unfortunately this researcher was unable to get precise figures.

pay subsequent bills[64]. These respondents are not against paying in principle, but the bill has to be reasonable: "We want to pay but we have not the money", (KaNy-8[65]). (Smith et al 2004:18) also found that residents expressed a willingness to pay "if their bills were reasonable". In fact several of the above respondents would qualify for the indigent register on current income levels and should have been in receipt of the water vouchers back when GNUC operations began because their circumstances have not changed[66].

With the introduction of FBW the voucher system was discarded and the question must be addressed: is affordability still an issue after FBW? If not, what other explanations are there for the continuing chronically low payment rates? As indicated FBW was interpreted by Mbombela as universal and in effect double[67] the government recommendation. National funding was not adequate and thus tariff increases were sanctioned to meet the shortfall. The increase in the GNUC area has been substantial: 2 separate 10% increases in 1 financial year. Further increases have occurred (refer to later section): a 15% was agreed for 1 January[68] 2005 and a further 4.16% in 1 July 2005 (MM-5). The GNUC General Manager suggests that FBW was the "worst thing that happened for the water industry" because they were forced to increase tariffs and the people the policy was meant to help "actually saw their bills increase", (GNUC General Manager [GNUC-1]).

When considering questions of affordability it is necessary to ascertain exactly how much water has increased in the tariff blocks most likely to affect township residents[69]. According to GNUC the average household consumption in the township is 12KL. The tariff increases over a range of consumption levels are set out in Figure 8. What is interesting is that there has been just 8% increase in the 6-12 KL consumption block. This is a marginal increase but if one's consumption exceeds 12 KL per month then charges escalate dramatically: a 58% increase has occurred in 6 years in the 12-18KL block and beyond 30KL the increase is

[64] One Matsulu household said that they paid the first bill but the "second bill escalated and we decided not to pay because we feared that each bill will escalate", (Mat-4); a Tekwane South resident had a similar experience: "I paid the first couple of months but then I saw the amount was increasing so I stopped", (TS-3).
[65] This household's income was just R170 and the debt level was prohibitively high at R6,000.
[66] Pensioners (KaNy-3, Mat-1 and Mat-2) or unemployed (e.g Mat-3 has been unemployed for 9 years, KaNy-8and TS-3).
[67] Mbombela provides 6KL of water and 6Kl of sanitation free of charge.
[68] Under the new/current tariff structure consumers are charged R20 for the first 12 KL of consumption (i.e. a flat rate) thereafter the blocks rise steeply. Those that go beyond 12 Kl per month will be charged even higher tariffs, so that the point of cross subsidisation becomes lower in order to finance this new initiative.
69 It is possible to skew a discussion on tariff increases and the impact on consumption by grouping together all consumption between 6-30KL and averaging out the increases. Wellmer does this and as a result distorts the picture by suggesting that there has been a 61.5% increase in this category, the category that will impact poorer users. As shown in Figure 8 the reality is less harsh than Wellmer suggests: an 8% increase over 6 years for the average township consumption level.

steeper still – the cost of water has doubled, which is in keeping with a progressive block tariff model. The route to equity is positioning the tariff increases at the high consumption rate, outside the consumption levels that poor residents may stray into.

Figure 10: Comparison of GNUC Costs Over its First Six Years of Operations

	Volume of Water Consumed				
	6KL	**12KL**	**18KL**	**30KL**	**40KL**
Cost of Water – Rands					
1999	7.56	18.48	29.4	51.24	72
2003 (Low Pressure)	0	17.64	35.28	70.56	103
2003 (High Pressure)	0	20.4	40.8	81.6	117
2005	0	20	46.4	101.2	147
% Change 1999-2005	-100	8	58	98	106

Source: GNUC Tariffs.

FBW sheltered users from the market only up to 6Kl; thereafter they are subject, regardless of income, to progressive block tariffs. What emerges is that a system (FBW) that was designed to help the poor has resulted in steep tariff increases at levels (12-18KL) that will directly affect the poor who reside in the townships unless they are very careful to monitor consumption. What is also apparent is that FBW has actually had a negative impact on cost recovery levels in the townships (cost recovery remains high in Nelspruit). As a result GNUC has fought for further tariffs increases to fund the shortfall. Has the FBW inadvertently made the cost of water services in the GNUC area unaffordable? If users consume over 12KL then cost is a real issue. To be an average there must be a sizeable number who exceed 12 KL per month.

The poverty indicators for Mbomebla remain high: for example 46% of households have incomes below R800 per month[70] and unemployment is high (around 38%). However, what is not apparent from these statistics is the geography of indigence. Work by TRAC Mpumalanga (2001) indicates that poor/unemployed households in Mbombela have, in the post apartheid era, relocated away from the townships towards the trust areas where the cost of living is lower and they are able to acquire larger plots giving them the opportunity

[70] 64% (78,757) earn less than R1,600 per month, according to statistics provided by Mbombela Municipality.

for some subsistence farming. Service provision is more basic[71] (communal standpipes) in the trust areas; however, no real cost recovery is pursued. Conversely those in employment, especially in the formal sector, have moved into townships which have better service levels and access to transport links to Nelspruit, (TRAC-1). The scale of this movement, however, is not known. It is noteworthy, however, that a third of those interviewed for this study, who are indigent, are long-standing township dwellers. While the general trend may be for lower income groups to move to the trust areas, there are still indigents residing in the townships. As there is currently no billing or cost recovery in the trust areas[72] there needs to be a focus on the townships in order to gain a clear understanding on whether affordability is still an issue and whether there are other reasons for low levels of payment. To this end a series of interviews was undertaken with a range of households with varying income levels and circumstances. Sixteen households were consulted in the three townships of Ka Nyamazane, Tekwane South and Matsulu, which has the lowest payment level of 8%. Appendix 5 sets out their household circumstances including income level, average bills and debt level. Five of the 16 had incomes over R10,000 (four resided in Ka Nyamazane). Affordability (ability to pay) should not be an issue with an income of 10 times the Mbombela defined poverty level (R800 per month). Only 3 of these households regularly pay their bills and are not in debt (KaNy-2, KaNy-5 and KaNy-6). One resident said "we who can afford must pay" – and recognised that there are "groups that cannot afford such as pensioners and child headed households", KaNy-2. These are the only households in the sample who understood how to read meters, regularly did so, and made an effort to conserve water[73]. The other 2 households (KaNy-1 and Mat-4) were not willing to pay their water bills in full: the reasons will be explored later. Mat-4 was billed R217 in January 2005, but paid only R30. This brings up the common practice of paying off a little, never the whole bill which KaNy-1 and KaNy-4 also do.

The next category is those with incomes of R1,800 – 2,000[74]. Three households fell in this group. Despite being a low income, it is still double the poverty line. Of these, two are willing to pay, one does not pay. The next category are carrying high levels of debts - the

[71] As suggested by Xali (2002), cost recovery encourages different levels of service provision and as the poorest people in Mbombela are to be mostly found in the trust areas this is a factor in explaining service differentials between the townships and trust areas.
[72] This is also the situation in the areas outside the GNUC area, discussed later in Section 4.
[73] KaNy-5 stated "I minimise and use water sparingly" and rarely goes over the basic allowance. In spite of the household's income level KaNy-2 suggested "it is expensive to exceed" the FBW allowance. KaNy-6 bills on average are R40-80 per month: "R40 is affordable". However, no children of school age reside in KaNy-5 or KaNy-6.
[74] It is recognised that there is a considerable fall in household incomes from R10,000 plus to R1,800-R2,0000 : there are no households representing the R2,000 to R10,000 group. This was not intentional; the households surveyed were randomly selected.

result of allowing others, according to those interviewed, to use their water for free. The Ka-Ny 9 household's income is R1,570 but their debt is R2.500, because they allow neighbours without yard taps to use their water. KaNy-4[75] is another interesting case. There are 6 households (KaNy-3, KaNy-8, Mat-1, Mat-2, Mat-3 and TS-3) with incomes below the R800 line or marginally above but with a high number of dependants.

Affordability is a real issue for this category and is often linked with debt. "I've nothing" complains KaNy 8, and with a monthly income of R170 it is not hard to see why. The level of debt has reached frightening proportions: R6,000. This is again because she allows neighbours to use her yard tap, free of charge "people come to ask for water. How can you pay for everyone?"[76]. GNUC officials (GNUC Customer Services Manager [GNUC-3], GNUC Town Managers for Ka Nyamazane [GNUC-4] and Matsulu [GNUC-5]) are not convinced that these cases allow their water to be taken for free and suggest that they sell the water. Further research would be required to collaborate this because the householders interviewed are adamant that they do not sell water. The two pensioners in Matsulu, one of whom is blind, are now responsible for 7 dependants of school age[77]. The household income is that of the two pensions (R1,480). They have tried to pay their water bills but if they do they find that by the end of each month there is "not enough money to pay for food or soap". The household is now in debt but they "do not know how much exactly…. it is too much", (Mat-2).

Location of townships is another important consideration. According to GNUC figures the rate of cost recovery in Matsulu, at 8%, is considerably less than in Ka Nyamazane (20%).

[75] This respondent owns a small grocery store and is the head of household with four adults and two children. The shop is the sole income for the household. For a period of four months the shop owner claims that he allowed residents on the fringe of the townships living in "squatter camps" to collect water from the tap in the shop "free of charge" because there was no communal standpipe in the area, thinking he was "helping". In March 2003 the shop keeper received a bill for the shop of R7,000. He was confused: was he not merely providing the informal settlers with their free basic water entitlement? Attorneys hired by GNUC have made arrangements with the shop keeper to begin repayments on the debt (he was warned that resistance could result in a court case which may double the amount he owes) and he has agreed to pay R350 per month. He is not, however, expected to pay interest on the debt. The shop owner is also responsible for paying the household water bill which for the month of February was R128. The shop owner is expected to pay both the shop-incurred debt and also keep up with regular household bills – he is adamant he "cannot afford that" ("cannot do two payments"). He says that he is "scared" about the level of debt and suggests GNUC "would threaten us if I do not pay". In view of this he "makes a contribution each month" towards the household bill and pays R30-40,which is considerably less than the actual bill, but it is all he can afford. The shop debt in February 2005 stood at R2,144 and he is scheduled to have finished repayment in March 2006. This debt has been a huge financial burden.

[76] It is difficult to deny neighbours water "you cannot say no", says one resident, (KaNy-3). In the past a neighbour had his meter removed and would have to pay R150 to be reconnected as well as the outstanding debt. This was beyond the means of the individual who turned to neighbours for help. "Last week there was a burst, who pays for this?" (KaNy-3)

[77] These are their grandchildren, whose parents have died.

Matsulu is located further away from Nelspruit the main employment centre - 30KM as opposed to 15KM - and there is visible evidence of lower incomes in Matsulu: smaller houses, lower levels of maintenance, fewer satellite dishes. Affordability is more likely to be an issue for the residents of Matsulu, which ties in with the lower cost recovery rates there. This reinforces the affordability argument.

This is a small and by no means representative sample: but it was random, and different wards in the townships were selected. What the sample does indicate is that affordability is still an issue: over one third cannot afford to pay regular water bills and if one included those in debt, one half of the sample are unable to pay for water. Debt is an important component of affordability, because some of those interviewed have been forced to sign repayment schemes that are crippling[78]. Mat-1, reliant on 1 pension (R740 per month), is expected to repay R100 per month and KaNy-4 is expected to pay R350 per month on top of the monthly household bill as outlined earlier. In this latter case the debt was accumulated inadvertently. Those in debt in Matsulu are charged interest (11%) on all their debt before and after FBW. This is because a different company, PSU, have a contract with Mbombela and the GNUC to collect both municipal service bills and water bills. Overall the impression gained is that many households are subsumed by debt, "I owe, I owe" says Mat-1. It has reached such proportions that a feeling of hopelessness results and households can see no way of clearing their debt, which is, in itself, a disincentive to attempt to keep abreast of current expenditure on water. One can identify a palpable sense of betrayal amongst the residents: the ANC and democracy has not resulted in an improvement in their circumstances; if anything many are financially worse off.

The remaining half of the sample cannot be explained away by affordability: other issues are at work. During the course of this research four main categories, all of which are important, have been identified: socio-economic, ideological, political and the final category, grievances. Many of the households interviewed identified several factors that explain their reluctance to pay the water bills.

The first category is that of socio-economic factors. Here two sub-categories have been identified: prioritising luxury consumption above municipal bills and lack of experience of budgeting/managing household finance. Turning to the first sub-category, there is evidence that some township residents do not prioritise water bills highly: "water is the last thing I

[78] Wellmer also found evidence of high levels of debt in the townships, often amongst pensioners: for example R9,440 for one Ka Nymazne pensioner and R7,327 for another, (Wellmer,2004,40-41).

consider[79]" says one Ka Nyamazane resident (KaNy-1) whose household income is around R10,000. An ANC Councillor suggested that township residents in Mbombela "pay more for cell phones[80]" than water services and many "people have accounts at Edgars (department store) and furniture shops but choose not to honour their municipal bills", (Mbombela ANC Councillor and Political Head of the Finance Committee [MM-C1]). Smith et al's research in the GNUC area identified a group of households who "obviously can afford to pay but have chosen to prioritise other expenditures such as their cell phone or TV accounts" and suggests that "[t]his issue highlights the low priority employed township households put to paying for their municipal bills" , (Smith et al, 2004: 15).

As of February 2002 civil servants who resided in the townships cumulatively owed GNUC R1.3 million in unpaid water bills. These civil servants' incomes are well above the poverty line and affordability is not an excuse for their non-payment. This group of consumers, who can afford to pay their water bills, have been targeted by GNUC in their post FBW credit control regime[81]. Work by McDonald using a national survey found that non payment was high amongst the new black lower middle class population[82] (this would include the civil servants). In this research evidence was found that some households, for example TS-4 and Mat-4, placed payment of prepaid electricity accounts above that of water because without it their fridges, television sets and charging of mobile phones would not function. Interestingly one household suggested "if water was prepaid people would pay", (TS-4). Even among those classed as indigent, priorities were not always towards paying service bills. The KaNy-3 household's sole income was one pension (R740) and it was claimed that water was not affordable; however the household had a large new television set with a subscription to music channels. This again raises the question of prioritisation amongst indigents as does the case reported by Wellmer of one Ka Nyamazane pensioner, in debt to the tune of R9,440, who had made the decision to pay for her funeral insurance (costing well over a quarter of her monthly income of R700) over paying her service bills, (Wellmer,2004:40).

The second socio-economic explanation for non-payment is a lack of experience of budgeting/managing household finances amongst township residents. One resident suggested that the black population were "baby birds": township and trust area residents were for over a generation dependent on the Bantustan state to provide their services at a

[79] Paying rent, school fees and purchasing furniture is prioritised above paying for water.
[80] Mobile phones are prepaid.
[81] The "Ka Nyamzane 500" project.
[82] As suggested in section 2.5 'opportunity cost' is an issue for this group – they cannot afford to pay for their service bills are well as luxury items, may chose to prioritise luxury items first. Satellite television dishes are common place in the townships as well as luxury foreign cars.

heavily subsidised rate; they were insulated from the market. Township residents became reliant on the state to provide their services[83]. Pensioners, in particular, are a group who are heavily indebted (all three pension headed households in the survey were in debt). This is not entirely surprising given their low incomes and also because they would have spent most of their adult life under the apartheid regime where they paid a flat rate for all their municipal services. It is a lot to expect this group of residents to suddenly be organised and be able to manage a schedule of different payments to different service providers. (Mat-1, a pensioner found the bills confusing). This is less of an issue for the younger generation but the legacy of the apartheid era still runs deep. One respondent suggested that "in black communities people tend not to not have a good financial management attitude: when it involves money they tend to shy away from it", (KaNy-2). This illustrates that service delivery is a serious challenge in South Africa and it will take a long time to change because this mindset is now deep rooted.

Ideological factors are the second category that explain low levels of payment in the townships. The anti-apartheid struggle is a recent memory and some suggest that the boycott "hang over" is still an important factor to explain the current unwillingness to pay for services, (TRAC-1) because residents were "used to a culture of non-payment" and the "mind set has not changed", (GNUC Customer Services Manager [GNUC-3]). The legacy of the boycott, an accepted social protest, was likely to be the prime reason for unwillingness to pay in the period up to the GNUC contract. As one GNUC official commented, not paying bills in effect "increased household income", (GNUC-3).

Some trade unions and activists claim that the low level of payment is due to the fact that households are unhappy that a private company is supplying their water. The PAC in particular are vehemently opposed to the GNUC concession on ideological grounds and were behind the 'Operation Vulamanzi" campaign. One Ka Nyamazane resident, whose household was in a position to pay for water, chose to make only infrequent "contributions". Part of the explanation given was "we do not respect privatisation" and a feeling "we have been Bantustanised", (KaNy-1). One resident suggested that some "hide behind the anti Bi-water [GNUC}talk", (KaNy-2). Two households (TS-4, and Mat-1) also stated that their communities had taken the decision to discontinue paying their water bills for this ideological reason. The argument that an anti-privatisation sentiment is behind the low-payment levels would be understandable: PSP would appear to be the cause of the increased water costs.

[83] This reliance is also apparent when it comes to maintaining household plumbing, which is explored in section 4.3.

For this reason, with the exception of two of the households with incomes in excess of R10,000 (KaNy-5 and KaNy-6) and one other (TS-1) all those consulted as part of this study wanted the municipality to supply their water: "the municipality should supply because Bi-Water (GNUC) is a contractor and they want money from us", (KaNy-8).

Trade union representatives suggested to Wellmer (2004:36) that residents would be more inclined to pay for their water if the council took over provision of service. This argument does not really hold because payment levels for other municipal services are equally low in the townships[84]. As we shall show, the rates of cost recovery for water in the areas outside the concession are also extremely low, so the argument that communities are not paying because they are ideologically opposed to a private company, with a majority of overseas shareholders, does not hold.

It has been suggested that there are still some residents who do not pay because they believe that water should be free because it is a 'gift of nature'. All respondents acknowledged that they needed to make a "contribution"[85] because there were costs involved in purifying, supplying and disposing of water: "water has to be paid for" (KaNy-2), "you have to contribute because they are working the water" i.e. purifying it, (KaNy-1). No evidence of an ideological opposition to paying for water was found; however there is a feeling that residents were paying too much (the exception being KaNy-5 and KaNy-6).

The final ideological argument is that non-payment in the townships can been seen as being a form of civil protest against GNUC's punitive credit control measures. As outlined in section 3.2 GNUC's pre-FBW credit control measures were strict. Repeated non-payment resulted in water cuts and eventually wide-scale removal of infrastructure (6,000 meters in Ka Nyamazane were removed). The reported cut-offs during the heart of the cholera epidemic in 2000 were widely condemned[86]. In the post FBW era GNUC undertook legal action against 800 households which it claimed were in a financial position to pay their water bills. Two evictions resulted but there was also a lot of negative press associated with this

[84] "Our municipal services that we continue to render in the township areas have about the same low payment levels as the private company BiWater gets. Our rates on property and the tariffs on refuse removal are at about the same low level of payment as what the concessionaire is experiencing", (Interview with Kotze,August 2003, in Wellmer,2004:36). The McDonald and Pape collection of 2002 also highlights low levels of payment for municipal services in general which, barring a few exceptions, are supplied by the municipality.

[85] One respondent who had recently moved into an informal settlement on the outskirts of Ka Nyamazane and relied on water from a communal standpipe that was not charged for stated that they were "happy to pay for the maintenance of the service, but feel that water should be free (KaNy-7). The household income was under R500 a month.

[86] According to the Deputy Municipal Manager, the reports were "totally over-exaggerated", (Mbombela Municipality Deputy Town Manager [MM-1]).

strategy: the case of Mrs. Anna Xaba reached the national press. She was issued with a warrant of execution but as a pensioner with an income of R800 she was unable to pay her debts (R7,327), (Wellmer,2004:41). GNUC's credit control measures, including the use of restrictors/tricklers, have backfired because they have encouraged the spread of illegal connections and tampering and have certainly angered residents and may be a contributory factor behind an unwillingness to pay. The problem of illegal connections and tampering is explored in section 4.3. GNUC has recently scaled back its credit control measures in the townships and this led one resident to comment that they are "scared of sparking that anti-Bi-water sentiment", (KaNy-2).

There are political factors which partly explain the low level of payment in the townships. During the local election campaign of December 2000, ANC candidates promised "Free Basic Water" for all (Wellmer,2004:32). It is easy to see how this could be interpreted as being a licence not to pay water bills. The imminent introduction of FBW was also a contributory factor to falling payment rates in 2000: in June 2000 payment rates in the townships was 38%, and this had fallen to 27% by December 2000 (FBW was introduced 1 January 2001), (ibid). Miscommunication of the FBW policy has played a significant part in the non payment issue: politicians, as part of the 2000 local election campaign, were guilty of misleading the electorate and did not dispel the myth of unlimited free water and free connections, which took hold. Consumers were not properly informed that beyond 6KL, tariff block charges would be applied. Whether it was genuine misunderstanding or "choosing not to hear", the outcome for GNUC was cancelling any progress in improving payment levels made through consumer relations: "Dispelling the myth of unlimited free water proved to be a formidable task for Bi-water", (Smith et al,2004:14).

A DWAF official suggests that for a cost recovery strategy to work there are 3 levels of "buy in": first, consumers need to be willing to pay; second, the policy needs to have political support ("buy in"), and third, committed officials. It was suggested that the first two criteria are often missing, (DWAF Mpmalanga Chief Engineer: Planning and Development [DWAF-MP1]). In the Mbombela situation there are suggestions that there is not enough political will to tackle the problem of non-payment. GNUC has been critical about some of the new councillors, possibly elected on the back of an anti-GNUC campaign, who have not acknowledged the opportunities brought by the project, and not all defend GNUC's achievements when unpopular decisions regarding credit control have to be put across. The Deputy Manager admits that when it comes to credit control "the problem is that the municipality is not efficient at enforcing [credit control measures] and following through".

Township residents (across Mbombela) are "not paying because they are not scared[87].....it is human nature not to pay if you can get away with it", (Mbombela Municipality Deputy Town Manager [MM-1]). According to an ANC councillor, auctioning houses is a "thorny issue….and doesn't augur well with the community….[because it is] viewed as living under the old order". GNUC has to have "proof beyond reasonable doubt" that the households they target have the means to pay their bills, (Mbombela ANC Councillor and Political Head of the Finance Committee [MM-C1]).

The final category of reasons can be termed grievances. As will be shown, some of these grievances, while often used as excuses for non-payment, are actually of fundamental importance. The first commonly cited reason for non-payment is the quality of the service[88]. One Ka Nyamazane household said that their payment of the water bills "depends on the service; if for a particular month the quality is poor I do not pay…….when the service quality improves I am willing to pay", (KaNy-1). This resident complained that they "cannot cook or bath with that water" because it is often dusty. No other respondent commented on their water being 'dusty'. There were, however, complaints about interrupted supply; this is particularly a problem for those in Matsulu where 24 hour water supply is available only in one ward, (Mat-5). Household Mat-4 reported that they often do not receive water for 3 days at a time and this is partly behind their reluctance to pay the full amount of the water bill. This is to some extent because of their elevated situation which means they are often "the last people to receive water".

Of fundamental importance is a general lack of understanding of how meters operate, many residents claiming they have never seen a demonstration of how meters function or how to read them. Only three households consulted regularly checked their meters and understood how they operated; interestingly these households were all in the R10,000 income category. In fact most households do not check their consumption and for poor households this is vital because as soon as they pass the 6Kl per month block they are charged progressive amounts. "We do not really concentrate on meters…..we only check if they [meter readers] are writing the right numbers", "we do not know if we get it [FBW] we do not know how to check it"(KaNy-3) (similar comments were made by KaNy-4). The meters are continually running and are not reset at the start of each month. One resident suggested that "this

[87] The credit control measures in the white towns are enforced strictly (refer to section 4.1). Credit control measures are not strictly pursued in the township (Kabokwene) supplied by Mbombela.
[88] A Mbombela official suggests that township residents are "moving the goal posts" in that they say they will pay their bills if they have regular supplies. When service levels improve there is another reason why they are unhappy with the service.

makes it difficult to keep a track on what you are actually using", (KaNy-2). Because households are unable to read the meters (or claim to be) there is a lack of trust over the meters "we do not trust it" (KaNy-1), and the bills they receive. Others complain they never see the meter readers, (KaNy-4).

Water bills were perceived as excessively high and many residents question whether the meters are operating correctly[89]. There is a commonly held belief that air in the pipes (because of restricted flows) means that in areas that have interrupted supplies, when the water is turned on, "the water rushes out and the meters go mad" (KaNy-4). There is also a concern that air pressure causes the meters to run[90] and customers are "paying for air", (Mbombela ANC Councillor and Political Head of the Finance Committee [MM-C1]). The ANC Councillor says "we are looking at this", (MM-C1). There is also the question of correct water meter readings by both the household and meter readers. According to GNUC "this meter story has been an excuse from day one". GNUC has developed a programme "how to read your meter", (GNUC Public Relations Manager [GNUC-2]). Some residents admit they had received a visit from GNUC staff to explain how the meters operate and about FBW (TS-1), but some are still unclear, (Mat-4). Indigent people will only receive the benefit of the FBW system if the meters are functioning and if they are properly educated in reading the meters and monitoring their consumption to stay within the 6KL limits if affordability is an issue. There is abundant evidence that people do not understand how to monitor consumption, and in areas reliant on meters the system falls down and potentially fails the poor.

The bills that consumers receive are viewed as being overly complicated and very confusing. Wellmer suggests they are "unintelligible"(2004:36). A Matsulu resident commented that he "does not understand why the bills are so high" and "does not think they are being charged fairly" (Mat-3), others agree: "they do not charge correctly", (Mat-4). The bills "do not split down into basic water and what extra used…does not say how much used….they just give an amount that is owed", (KaNy-1). This researcher can confirm this: the bills do not indicate what the household has consumed over and above 6KL. The bills are not broken down into the various components – the fixed charge, consumption above FBW (so many litres in each tariff band) nor the VAT.[91]

[89] The tampering with meters is an issue, as outlined in section 4.3, and this could also explain why meters are not operating properly.
[90] Wellmer also reports this issue (2004:36).
[91] VAT is 14% and it is confusing because the published tariff charges do not indicate that the charges exclude VAT, and this makes a significant difference to the total bill.

Difficulties encountered understanding the bills suggests that township residents require education as to their rights (to 6KL of water) and their responsibilities (to pay for the water they consume above 6KL) as well as understanding the meters. GNUC and Mbombela point to their education efforts: the printing of pamphlets and other educational materials. Smith et al suggest that it will actually take a generation to ingrain residents with a clear understanding of their rights and responsibilities; this is not something that can be achieved overnight, (Smith,2004:19). Further this is not BiWater's competence – their competence lies in the infrastructural side, managing supplies – not the soft/social side of service delivery, (idid:14).

GNUC's billing system was further undermined, Wellmer alleges, because it was discovered later on that some of the early bills did contain 'mistakes' and consumers were incorrectly overcharged. It is suggested "[this contributed to undermining the credulity of the concessionaire". (Wellmer:36). Low levels of payment can also be explained by the fact that many of the bills are sent to people who are deceased. A GNUC study in Ka Nyamazane found that out of 6,000 households on their records, 125 were actually dead. The bills were being sent to the wrong people, (GNUC General Manager [GNUC-1]).

It is suggested that GNUC did not listen to the communities in the early stages of the consultation process and did not consult residents over the installation of meters: they "did not inform us about installing meters" KaNy-2, Mat-4. Smith el al suggested that there was a need to improve the communication lines between GNUC, the council and the township residents (2004:26). Attempts have been made by GNUC to improve communication: water forums have been established and calls for a flat rate system have been listened to[92]. Communication is still an issue and residents suggest there is "very little communication", (KaNy-2, KaNy-4). The majority of those surveyed were aware that a new tariff system was in place. There were also complaints over where they are to take complaints over high bills because the payment centres in the townships "only take payment…you cannot come there with queries. If you become angry you are told to please leave", (KaNy-4). Wellmer also encountered similar complaints, (2004:36).

Finally residents in Tekwane South complain that they have to travel to Ka Nyamazane to pay their bills as there is no payment centre in their township, (TS-3). Residents have to go in person to pay the bills, and having to arrange transport to a payment centre discourages

[92]GNUC has incorporated a flat rate structure into its new tariff structure – 1 January 2005.

regular payments. GNUC recognises that this is an issue and has stated that they "will open an office to pay in Tekwane South" (GNUC-3).

This investigation into the reasons for non payment indicates that affordability is still an issue for many people in the townships; however it is not the sole reason for low payment levels. There are a lot of other reasons why many households are unwilling to pay their water bills in full and these factors contribute to a situation where it is the norm not to pay i.e. an environment or culture of non payment. The difficulty for service providers is that when non-payment is the norm, and there doesn't appear to be stigma attached to it, it becomes a self-perpetuating cycle and fewer and fewer people will be prepared to pay. The culture of non-payment in the townships is not just the legacy of the boycott era: it is more complicated than that. This investigation believes that both affordability and a culture of non-payment explain the low level of payment in the townships. Strategies that ignore one set of explanations are flawed. In early GNUC documents it is clear that their strategy to deal with low levels of payment was based on the belief that people were "unwilling to pay", (GNUC,2001:6-7) because of a culture of non-payment[93]. This actually masks the complexity of the issue and the fact that for many affordability lies at the heart of non-payment as well as an inability to monitor consumption. The punitive credit control measures such as cut off and legal action were based on this belief that unwillingness was the issue. They are, however, expensive and often counter-productive[94].GNUC admits its previous credit control strategies "created a monster" because they resulted in the proliferation of illegal connections and tampering with the infrastructure and suggests " we have learnt from our mistakes", (GNUC General Manager [GNUC-1]).

GNUC and Mbombela undertook a review of the concession in late 2004 and concluded that the bills have to be "legitimate" (going to the right person) and they have to be "affordable" and the "tariffs understandable", (GNUC-1). As a result of the review GNUC has successfully argued for a 15% increase in the tariffs[95]. The structure for the tariffs has, however, been altered to incorporate a flat rate charge[96] of R20[97] for the first 12 KL of water used (and R20

[93] The GNUC PR Manager is quoted as saying in 2002, in response to legal action being taken in the township "Letters of demand have been sent out. This is the beginning of a process to break the culture of non-payment in the townships", (reported in Wellmer,2004:35).
[94] They are a "futile exercise" according to an ANC councillor. The best approach is to "do education" about leakages (Political Head of the Mbombela Finance Committee [MM-C1]).
[95] This tariff increase will be used to fund the capital programme (R108 million has been allocated); to hire additional staff and for the training programme, (GNUC General Manager [GNUC-1]).
[96] GNUC suggests this is in response to calls from the community for a return to a flat rate system.
[97] It is noteworthy that these figures do not include VAT: the GNUC General Manager "recognises that VAT is significant to poor people", (GNUC-1).

for the first 12KL of sanitation): "We think that is affordable", (GNUC-1). The new tariff system also relies on consumers being able to read the meters accurately. As indicated above there is an abundance of evidence that that situation is far from being resolved.

GNUC now wants to focus on "incentives" rather than just "penalties" in an attempt to improve payment levels. As part of their new strategy GNUC is going to focus on demand management and to educate people to avoid wasting water so that they are able to keep consumption down and in doing so, their bills and debt levels (GNUC-1). Whilst this is a sensible approach, their previous education strategies and campaigns seem to have failed, particularly with regard to meter reading. New strategies will need to be carefully planned. The issue of debts will still remain, however.

GNUC's strategy is now to focus on differentiating those that genuinely cannot afford to pay from those that will not pay. "The big challenge is to focus on those that can but won't pay", (GNUC General Manager [GNUC-1]). To this end they are now developing a comprehensive data base[98] of their customers. Household surveys[99] are being undertaken to make sure the bills are going to the correct person and to determine people's ability to pay. This "customer audit" will also spearhead a programme of maintenance (repairing leaks), (GNUC Customer Services Manager [GNUC3], GNUC Town Managers for Ka Nyamazane [GNUC-4] and Matsulu [GNUC-5]).This will be a huge undertaking and maintaining the accuracy of the data base will be an ongoing process. This initiative will incur considerable costs, estimated at "R700,000 per annum for the next five years", but GNUC maintains that if they have an accurate data base[100] and are able to produce legitimate bills GNUC feels it has a "fighting chance" (GNUC-1). GNUC will employ more people to undertake this process and the strategy is to divide the townships into zones and a GNUC employee "customer liaison officer" will be responsible for getting to know their constituents and their changing circumstances and the impact this has on their ability to pay. The role of the customer liaison officer will also be to "police" the area for illegal connections and tampering, (GNUC Customer Services Manager [GNUC-3]). Whilst the "objective of the exercise is to collect revenue"[101] (GNUC General Manger [GNUC-1]) and to reduce unaccounted for water (UAW)

[98] Interestingly one township resident agrees: GNUC "need to make a profile of who can pay but choose not to and they need measures to force them to abide"(KaNy-2)
[99] Household surveys are required because "location is not a function of poverty". There is evidence of considerable wealth in the townships, large 2 storey houses and luxury cars, (GNUC-1).
[100] GNUC would also be in a better position to target FBW to indigents (see section 4.5).
[101] GNUC recognises that cross subsidisation from Nelpruit will still be required because they will "never cover the cost of supplying Ka Nyamazane" (with 24 hour supply) through cost recovery in the townships "because they use small volumes and people cannot afford" – the purpose of the exercise is to improve cost recovery which will ease GNUC's financial situation and help fund further investments which have been on hold, (GNUC-1).

(through identifying illegal connections and leaks) the strategy is a promising initiative though it is dependent on the liaison officer developing good relations with the community and sensitively managing cases of illegal connections.

The data base will also allow GNUC to target its credit control strategy more effectively and in doing so avoid negative publicity "we do not want little old ladies" (GNUC-1, GNUC-3). Whilst auctioning houses or their contents is still an option, the General Manager states "I do not think we will do it again". GNUC strategy will be to continue to focus on those who have the financial means to easily pay for water. Legal firms have been employed to trace debtors, many of whom are government employees. To be able to serve a legal notice, it has to be delivered in person. The company identifies where people work. Once the notice is served the debtor has to agree to a payment schedule. If this is reneged upon they are issued with a "Garnashe Order" by the courts. This instructs the employer to deduct money from the salary or the individual to pay off their debts, (GNUC-1).

As another strategy GNUC is also now testing new 'tamper proof" restricting devices to use in households where affordability is an issue. The introduction of yard tanks (at GNUC's own cost) is another strategy being considered "for those who cannot afford higher bills we will install roof tanks so that they always have a supply of water but it is restricted to 200 litres per day", (GNUC Customer Services Manager [GNUC-3]). Prepaid meters are going to be piloted in one ward of Ka Nyamazane township and in one small trust area, according to the GNUC Town Manager for the area (GNUC Ka Nyamazane Town Manager [GNUC-4]). Prepaid meters may have many benefits for service providers; users have to pay upfront thus preventing people running into debt and thereby avoiding many of the difficult credit control confrontations associated with regular meters, (McDonald,2002:19). They are not always to the benefit of users who may self impose restrictions. DWAF (2002c) recommends pre-paid as a last resort only.

GNUC's multi-pronged approach to credit control recognises that the reasons for non-payment are complex, and this is a positive step. Without an increase in cost recovery levels the financial viability of the concession is under treat and GNUC could still try to extract itself from the contract. This would have huge negative financial implications for Mbombela.

4: WATER SERVICE PROVISION IN MBOMBELA

4.1: Service levels, tariffs, cost recovery and credit control measures

This section will investigate service delivery, cost recovery and credit control mechanisms in the area outside the GNUC concession, where Mbombela Municipality is the WSP. In this area there are two former white towns; White River and Hazyview (refer to map). As in Nelspruit, both towns have a high level of water service, with their own supply sources[102]. Water meters are in place and payment levels are high, for instance 96% for White River in February 2005 (Mbombela Municipality Deputy Financial Manager [MM-4]) and 90.5% of water was accounted for in Hazyview (Mbombela Municipality Hazyview Engineering Technician [MM-3]). Figure 8 below sets out the tariff structure from 1 July 2005 approved by Mbombela[103].

Figure 11: Residential Tariff Structure as of 1 July 2005, approved by Mbombela Municipality (Source: Mbombela Municipality)

	White River Normal	White River Restrictions	Kabokwene	Hazyview	**GNUC** Low Pressure	**GNUC** High Pressure
0-6 Kl	Free	Free	Free	Free	Free	Free
6-30Kl	R6.44	R6.01	R3.64	R4.38	R3.15	R3.64
30-100Kl	R5.18	R11.00	R3.78	R2.64	R3.46	R3.78
100+Kl	R4.87	R22.00	R4.74	R2.62	R3.65	R4.01
Basic Charges per month	R30.86	R30.86	N/A	R59.93	R10.03 empty stands only	

Different locations are charged differently: tariffs are determined by volume consumed and the cost of supply. Residents in White River[104] pay more for their water than in Nelpsruit or Hazyview. It is interesting to note that in both Hazyview and White River (in normal conditions) progressive block tariffs are not in operation. The opportunity to generate excess income for cross subsidisation is not pursued.

Credit control is pursued in White River and Hazyview and people have restrictions applied or have supplies cut for non-payment, though it is a rare occurrence, less than 3% in Hazyview. There is a "culture of paying" in white towns, (Mbombela Municipality Hazyview Engineering Technician [MM-3]), (Mbombela Town Planner [MM-2]). FBW has not reduced

[102] Water shortages are, however, becoming an increasing issue for White River.
[103] This is an 8% increase on previous levels.
[104] This is because their water is from another, more restricted, supply and the network is old and costly to maintain. Two tariffs apply depending on water security, (Mbombela Municipality Deputy Financial Manager [MM-4]).

cost recovery in the white towns. This is similar to the situation in GNUC where residents of Nelspruit continue to pay in spite of numerous tariff increases.

The black township of Kabokwene receives a high quality of supply 7 days a week[105] and most residents have taps on their stands, if not internal taps. Supply is metered and 2,000 meters were installed by the council[106]. Figure 8 indicates that tariff rates are similar to those of the GNUC high pressure zone.

Cost recovery levels are low in Kabokwene: in February 2005 cost recovery was "nearly 15%" – "the level of payment in very weak" (Mbombela Municipality ANC Councillor and Political Head of Financial Committee [MM-C1]). Households are presented with a combined municipal bill (excluding electricity) and it means that residents are not paying for any municipal service, bar electricity[107]. Cost recovery is a "a huge problem" (MM-2): "bills were sent out in the past but they eventually stopped because the cost of sending the bills was higher than the amount they got from it" (municipal official).

In terms of credit control, municipal officers admit "we're not efficient" (Mbombela Municipality Deputy Town Manager [MM-1]) nor "as strict" as GNUC, (Mbombela Municipality Town Planner [MM-2]). In the past attempts were made to repossess houses in Kabokwene but this was unsuccessful, (MM-2). In essence credit control measures are not being pursued in Kabokwene – it is seen as a "political arena" and councillors fight shy of unpopular actions. The council is, however, "trying to get payment levels up" (Mbombela Municipality Deputy Financial Manager [MM-4]): it is introducing electronic summons systems, but this is still in the early stages of development. The levels for non payment (an informal subsidy) in Kabokwene are comparable to those of the townships in the GNUC concession area[108] and it is likely that the reasons for non-payment are also comparable (refer to section 3.4).

Kabokwene apart, Mbombela is responsible for the huge former homeland trust area known as Nsikasi. GNUC supplies to half of the southern part of the Nsikasi (trust areas such as Daantji and Msogwaba); the rest is supplied by the municipality[109]. Water is not metered in

[105] Hours of supply are sometimes restricted.
[106] Of which it is estimated that only 10% are working (Mbombela Municipality Town Planner [MM-2]).
[107] Eskom, the parastatal electricity company supplies electricity to the townships and trust areas in Mbombela. The municipality itself distributes electricity to the former white towns.
[108] This dispels the theory that the objections to PSP are behind the low cost recovery levels in the GNUC area because there is no discernible difference.
[109] The transfer process of the DWAF operated regional water supply network is currently under way (refer to section 4.6).

the trust areas and is supplied from communal stand pipes. The northern Nsikasi area receives chlorinated/disinfected (not purified) water from the Sabie River. In theory the system is managed to ensure that all settlements in the northern Nsikasi have a fair chance to obtain their piped water. Valves are opened and closed to ensure that water is not all consumed by those more fortunately situated in the network system. This means that water is available regularly but not necessarily daily, and as a result water must be stored, (Mbombela Municipality Hazyview Engineering Technician [MM-3]). "The service level is workable, not desirable" (Mbombela Municipality ANC Councillor [MM-C1]), i.e. people would prefer yard connections but this is not realistic, (refer to section 4.6).

As people are reliant on a basic level (or less) of water service provision i.e. communal stand pipes, and because of the water quality, intermittent supply, absence of meters and therefore no tariff for the areas, cost recovery is not pursued, "we cannot do cost recovery", (Mbombela Municipality ANC Councillor [MM-C1] and Mbombela Municipality Town Planner [MM-2]). Water service provision is wholly subsidised in this area.

Where there are meters there is some assurance that households are in receipt of their FBW entitlement. Where there are no meters as in trust areas there is no guarantee that people are receiving that amount[110], (MM-C1).

4.2 Malekutu Case Study

The village of Malekutu is situated in the central Nsikasi area and is at the end of two regional supply lines. Situated in the heart of the former Kangwane homeland, Malekutu is an area of high unemployment and low household incomes. A focus group was held with 5 households; all were low income, though some were in regular employment and others were unemployed or drawing a pension. In 1998/9 communal standpipes were erected in the area and some residents paid R165 to have a yard tap installed. Only one of the households in the focus group was able to afford the connection.

As a result of over-consumption further up the supply lines, bulk water from the communal standpipes "is just like Christmas". Supplies are unpredictable and cannot be relied upon[111]. One resident suggests that it "feels like we are cursed to live in this area".

[110] As mentioned previously a DWAF study found that the average standpipe consumption was 2-3KL per month: the amount that people can carry is a determining factor.
[111] The area often gets water two Sundays in each month for 30 minutes.

The households in the focus group are reliant on a borehole which supplies 3 tanks (jojos) from which they collect water. The water is deemed safe though it is salty. Water for washing is collected from nearby rivers. The focus group suggested that the borehole supports around 2,000 residents and it is not uncommon for fights to break out when people queue for water. The borehole is generally reliable but when the pump breaks there are problems. The borehole had been out of operation for 8 days and residents were faced with the prospect of no water and "not being like camels" they were forced to arrange transport to the nearby township of Kabokwene. The focus group concluded that in their area "water is a big disaster".

Figure 9 below sets out the number of residents in some of the households and the volume of water they collect. All the households collect less than the recommended 25litres per day per person, and this corresponds with DWAF research which indicates when water has to be collected, households do not tend to collect their full entitlement. The focus group said there was a limit to how much they could collect; especially if the queue was long, and that overall they did not have enough water. There are some other jojo tanks in the area which the authorities fill from water tankers in time of stress but "only those who have money bought jojos and those without have to go and beg for water" (the cost of R2,800 is prohibitively high). This led some to suggest that the authorities "do not think of us in terms of water" and as a result people's access to water services is substandard.

Figure 12: Water consumption in Malekutu

Number in Household	Volume of Water Collected Each Day.
10	2,000 litres
7	1,025 litres
6	1,000 litres

Officially the residents of Malekutu do not pay for water[112] but there are costs associated with water in this area. As indicated the cost of yard connections and private jojo tanks is beyond the means of most households. There are other instances where people have to pay: when there are shortages people collect water from their place of work in the towns. While there is no cost for this they do have to pay for "luggage" in the taxis to transport it home. A 25 litre can costs R3.50. Another householder has mobility problems and is forced to pay neighbours to collect water at a charge of R5 for 3 x25 litre cans. This indicates that in the trust areas, water is not entirely without cost.

[112] One pensioner suggested "the suffering is how we pay".

4.3 Illegal Connections, Tampering and Unaccounted for Water

As indicated previously, illegal connections and tampering with meters and infrastructure is also a major problem in the GNUC concession area. This section will therefore also contain references to the GNUC area as well as the areas outside the concession.

"Theoretically enough bulk water is pumped into the system", (Mbombela Municipality Town Planner [MM-2]) (DWAF Mpumalanga Chief Engineer Planning and Development [DWAF-MP-1]), so that settlements like Malekutu at the end of supply lines should still receive water. The problem is Unaccounted for Water (UAW) as a result of illegal connections and leaks and wastage due to their poor workmanship. The problem in the trust areas, according to a DWAF official, is that cost recovery is not being pursued, and the area is not adequately policed with the result that there is no incentive to conserve consumption, (DWAF Mpumalanga Chief Engineer Planning and Development [DWAF-MP-1]). Households residing in higher locations, where pressure is low, are also disadvantaged because users in lower settlements, where pressure is higher, are depriving them of their rightful share of water, (DWAF-MP1). This is also a huge problem in the GNUC concession areas (GNUC Town Managers for Ka Nyamazane [GNUC-4] and Matsulu [GNUC-5]).

The main source of trouble is illegal connections to individual residences from the supply lines. There is anecdotal evidence of some households siphoning up to 600 litres per person (which is more than the most affluent areas of South Africa); vegetable gardens have been identified (DWAF-MP1) as well as the watering of cattle (Mbombela Municipality Town Planner [MM-2]).

The Nsikasi area is "fraught with illegal connections….that is the main problem[113]" (Mbomebela Municipality Engineering Technician Hazyview [MM-3]), (DWAF-MP1), (MM-2). The trust area of Daantjie in the GNUC area is also "rotten with illegal connections", according to the GNUC Town Manager. The problem is that they are of poor workmanship and vast wastage[114] takes place through leaks (MM-2), (DWAF-MP1), (MM-3), (GNUC-4), (GNUC-5). In an attempt to counter household over-consumption of water and depriving those further down the network, water is sent through the system at night to storage networks. The extent of leakages can be seen with these 'night flows' because water leaks out of the system and never reaches its destination, (DWAF-MP-1). According to DWAF

[113] This is the main problem for the council because they are not pursuing cost recovery! Illegal connections and UAW are an important second problem for GNUC.
[114] DWAF found that in two settlements two Olympic sized swimming pools of water were going to waste each day, (DWAF-MP-1).

wastage in many areas is 50%. UAW levels are also high in the GNUC concession area: currently 60% in Ka Nyamazane, (GNUC-4).

As a result of these informal connections and loss of water, the municipality is forced to tanker water into areas where there are no boreholes: this is an expensive undertaking, (MM-3). GNUC has also installed numerous jojo tanks in communities that receive only a severely interrupted supply, or are residing in an informal settlement on the fringe of the townships, and they fill them regularly, (MM-4 and 5).

The problem is that leaks go unchecked, regardless of whether connections are legal or illegal, because residents are "not in maintenance mode" (MM-3) and "do not attend to plumbing[115]" (MM-2), washers[116] are not replaced which exacerbates UAW levels. Finance for household maintenance is limited and where it has been made available (for example R6 million grant from DWAF) "remarkable results[117]" were achieved (MM-2) (MM-3). However, the success was short lived because maintenance needs to be ongoing, leading one Mbombela official to conclude: "R6 million was wasted 3 years ago".

Tampering with the meters is an important issue in the GNUC area. One householder admitted to hiring a local plumber, for a sum of just R20, to bypass the meter. GNUC discovered the meter had been bypassed and they were issued with a fine of R150. This householder estimates that one in ten households in Ka Nyamazane tamper with their meters, (KaNy-2). Another householder suggests that "most [meters] are not operating", (KaNy-1).

Some attempts have been made to identify and disconnect illegal users but what is of concern is the speed with which illegal connections are replaced[118] and the intimidation of municipal workers carrying out disconnections (Mbombela Municipality Engineering Technician Hazyview [MM-3]). GNUC also reports intimidation of its workers.

As indicated the issue of UAW and illegal connections is also a concern with the trust areas in the GNUC concession area. The motivation appears to be a desire to improve access to

[115] The tap of one householder in Matsulu township (GNUC area) has been leaking for 6 months. They had reported the situation to GNUC but were still waiting. The only people who visit them are the meter readers. The leaking tap has impacted their bills, (Mat-2).
[116] A Matsulu (GNUC area) household reports that the yard tap is not functioning because of a broken washer but is prepared to wait for GNUC to repair it; she has "been waiting a long time", (Mat-1).
[117] For example settlements at the end of the supply lines received water.
[118] In the northern Nsikasi, within 3 months of disconnections in one area half the illegal connections had been put back by the residents, (MM-3). This indicates the scale of this issue.

water services. Illegal connections in the townships in the GNUC area and Kabokwene is also an issue: avoiding payment appears to be at the heart of the problem, especially in the GNUC area, less so in Kabokwene because of the weaker policing levels. Illegal connections and water stealing does occur in the white towns but instances are rare and are severely dealt with if detected, (MM-3).

4.4 Financing Water Services in Mbombela

When FBW was introduced in Mbombela, the tariffs for White River, Hazyview and Kabokwene were increased on average by 7% (Mbombela Municipality Assistant Director Revenue and Customer Services [MM-6])

In the case of Hazyview and White River the tariff increase, as well as the high rates of payment for services, would fund their FBW provision. However, because of the small size of the settlements and because progressive block tariffs are not in operation "there is no cross subsidisation" to fund FBW elsewhere.

As indicated cost recovery rates in the township of Kabokwene are exceedingly low (under 15%) and there is no cost recovery in the trust areas. Mbombela admits that if they had to rely on payment for water services to fund the cost of FBW and consumption above 6Kl they "would have collapsed", (Mbombela Municipality ANC Councillor and Political Head of the Finance Committee [MM-C1]). National funding in the form of the Equitable Share is an important source of finance for FBW. Mbombela's Equitable Share for 2005/06[119] is R90,706 million and R101,724 million for 2006/07 and R110,538 million for 2007/08. For the financial year 2005/06 R60.3 million has been allocated by Mbomebela to the operations side[120] and the remaining third to administration (which is more than the 22% recommended by DWAF). R10.8 million, about 10% of the total Equitable Share, has been allocated to water services, R6.5 million of which will go to supporting FWB (the balance of R4.6 million has been allocated for the maintenance of infrastructure in the peri-urban areas) (Mbombela Municipality Deputy Financial Manager [MM-4], MM-C1). The proportion of the ES given to GNUC is set in section 3.3.

[119] The allowance for 2005/6 is R30 million more than 2004/5.
[120] The Equitable Share is a grant to assist with the provision of basic services to the poor – basic electricity, refuse collection as well as water and sanitation.

The DWAF Chief Engineer for Mpumalanga Province is adamant that the "Equitable Share has to be conditional" because in his experience "a lot of the Equitable Share is not dedicated" for its intended purpose i.e. provision of basic free services for the poor[121] .

As it stands there is still a shortfall and the cost of FBW and service delivery is being covered from other locally raised sources of revenue, including revenue generated from distributing electricity to the white towns in the municipality, (MM-C1). The other main source of finance for basic free services and the shortfall caused by non payment is the municipal Bad Debt Fund. In the 2005/06 budget R30 million has been allocated to this fund. If Mbombela did not budget for "bad debt provision they would not be able to cover the total costs", (Mbombela Municipality Deputy Financial Manager [MM-4]).

GNUC is more reliant on cross subsidisation than Mbombela because it has Nelpsruit in its area. GNUC also does not have access to other sources of funds such as the Bad Debt Fund.

4.5 Targeting Free Basic Water

The financial sustainability of Mbombela's universal FBW and sanitation policy has recently been questioned at a Provincial workshop: "can Mbombela really supply to all? The answer was no", (Mbombela Municipality Assistant Director Revenue and Customer Care [MM-6]). A decision has been made to begin moves to target FBW to indigents via the indigent register. This is in line with DWAF's second scenario for FBW provision but it is dependent on a functioning indigent register and policy. Mbombela's indigent register is out of date as a result of the universal FBW policy. In Mbombela households with a monthly income of less than R800 per month are eligible for indigent status[122] . Pensioners are in theory automatically included on the register[123]. There are currently only 4,159 households on the indigent register. Mbombela's own statistics indicate that 46% of households (56,507 households) in Mbombela earn less than R800 a month and 37% of the adult population are unemployed. This indicates how out of date the indigent register currently is. Registered indigents will be entitled to 6KL of free water each month[124].

[121] Municipalities are free to use the fund for any purpose "If they want, they can buy cars with the Equitable Share", (DWAF-MP1).
[122] The status of illegal immigrants was raised; this was clearly a thorny issue. The researcher was told that "Illegals are not applicable for the indigent register" and cannot "access grants", (MM-6).
[123] A problem for the municipalities is that pensioners often have working relations staying with them and they "unfortunately hide behind the pensioners", (MM-C1).
[124] They will also be entitled to 50 Kilowatts of electricity free of charge.

An Indigent Management Division is being created within the council, the role of which will be to register indigents in the municipality. The unit will be manned by 5 permanent staff and fieldworkers on a temporary basis. The fieldworkers will be used to register indigents in situ: applicants will no longer have to go to council offices or be reliant on their ward councillors. The task facing the unit is huge and there are questions over whether this unit is large enough to register households in sufficient numbers. The council has decided to focus their registration efforts on the formalised township areas (including the GNUC area), because it will be "quicker to do", (MM-6). The level of indigence is likely to be higher in the trust areas, according to the work undertaken by TRAC 2001. However the registration process is scheduled to start later here -the council estimates in 2006[125]. Mbombela argues that the trust areas are "getting water for free" at the moment, so it is not as necessary to focus on these areas, (MM-6). There is some justification for this argument. By 2007/8 it is estimated that the trust areas will account for 78% of the total registrations, (MM-6).

Figure 13: Mbombela Indigent Registration: Households in Townships and Trust Areas and Estimated Cost

	2004-05	**2005-06**	**2006-07**	**2007-08**
Townships	4,159	5,323	5,005	4,498
Trust Areas	-	2,282	6,117	13,495
Total	**4,159**	**7,605**	**11,122**	**17,993**
Total Cost	**R761,619**	**R3,521,672**	**R4,517,529**	**R6,576,504**

Source: Mbombela Municipality.

Beyond 2005/06 it has been projected that the number of registered indigents in the townships will decline. This is based on an assumption that there will be job creation in the area[126]. The projected number of indigents is based on 2001 census figures; one can question how reliable these figures are in view of the movement into the area. It is likely that the projections are an underestimation of the numbers.

With the exception of pensioners all households will be required to reapply for indigent status each year. These households will be revisited each year. The municipality suggests "renewal will not be a huge task". This writer is not convinced, judging by the scale of the task and the limited numbers in the unit.

[125] Where it estimated that 2,284 will be registered (i.e. 40% of the total registered indigents). This writer suggest it will probably take the council longer than this time frame to start work in the trust areas because it estimates that it will take the unit 6 months to register Ka Nyamazane township and a further 6 months to register Kabokwene township alone.

[126] This assumption has been based on the National Government target to reduce unemployment by 50%, rather than on local employment opportunities in the area.

The targeting of FBW has many important implications; not least the tariffs will have to be restructured again and then communicated to the public. Experience of the voucher system suggests that a low take-up of the scheme could be an issue as well as the administrative burden. But the council has concluded that the universal application of FBW is not financially sustainable and that geographical subsidies are not appropriate due to the mix of income levels in the townships. It is not clear how the system will work in the trust areas without a mechanism to measure consumption[127] and collect revenue from those above the poverty threshold. In the townships the targeting of FBW will have significant ramifications and for those households whose incomes are just above the R800 per month threshold, affordability for water services could become even more of an issue than it is currently, especially for those who stay within the 6Kl allowance.

4.6 Subsidising Basic Infrastructure Provision

The provision of basic infrastructure is an important component of the government's agenda to improve access of the poor to water services[128]. Since 2000[129] , following the second boundary change, Mbombela has been faced with an enormous challenge of being the WSP[130] for the vast former homeland area of the Nsikasi.

The infrastructure backlog facing Mbombela is daunting: in 2005 32%[131] of households (39,490) do not have access to a basic level of service (i.e. a communal stand pipe within 200m of their dwelling) and 63% are without access to basic level sanitation (i.e. VIP latrine).

The Municipal Infrastructure Grant (MIG) is the government grant designed to subsidise the provision of infrastructure and the Mbombela allocation for 2005/06 was R63,817 million[132] . As indicated previously, the MIG is conditional and DWAF has a measure of control over its allocation: Mbombela has, using government guidelines, allocated 75% to basic service provision of which 72% has been assigned to water and sanitation infrastructure. As indicated by figure 11 there is a considerable shortfall between the level of finance Mbombela requires and MIG funding available. In spite of finance raised locally, there will be

[127] The use of yard tanks is advocated by some municipal officials, (MM-6)
[128] As indicated in section 3, GNUC has made considerable progress in its early years to improve the access in the concession area. PSP was pursued because it was felt that the then Nelpruit TLC did not have the financial capability to finance the infrastructure backlogs.
[129] Officially municipalities became WSA in July 2003. DWAF and Municipalities are in the process of transferring the operation and maintenance of the regional supply schemes: this is covered shortly.
[130] PSP is not a viable option because with only 2 small former white towns, opportunities for revenue generation are minimal.
[131] Statistics supplied by Mbombela Municipality.
[132] The MIG allocation for 2006/07 is R80,898 million and for 2007/08 it is R86,345 million.

a shortfall of R7 million in 2006/07. This indicates the scale of the backlog and financial constraints facing Mbombela.

The situation is being exacerbated by an influx into the Mbombela area[133] from other parts of South Africa and illegal immigrants from nearby Mozambique and also Zimbabwe. Figures on the scale of the influx are not readily available; municipal officials themselves do not have accurate figures. Anecdotal evidence suggests that it is on a huge scale. New settlements are springing up on the fringes of townships (referred to locally as 'squatter camps') and in the trust areas. The issue is that "a lot of development is done in an ad hoc way" (Mbombela ANC Councillor [MM-C2]) there is a lack of planning and officials complain settlers go into areas "where we cannot develop infrastructure economically or practically[134]", (Mbombela Municipality Town Planner [MM-2]). Mbombela "cannot keep up with the provision of services……we lag behind", (MM-2). A councillor suggests Mbombela "should be stricter….if people build where they are not supposed to, we won't provide services". The problem is that the "legislator does not want to use enforcement because it is seen as political".

Many of the settlers are thought to be behind the proliferation in illegal connections. In an attempt to reduce the problems caused by poorly constructed illegal connections, Mbombela is starting in some trust areas to erect standpipes within 100m of each household; thereby improving access and reducing the incentive to make illegal connections. As MIG funds are only available for a 200m distance the shortfall has to be met by Mbombela who are using the VAT they claim back from water and sanitation, (MM-2). The initiative is at an early stage and the scale of the backlog, influx of new settlers and lack of funds could halt this promising initiative.

Mbombela fears its financial situation will further deteriorate by the transfer of the DWAF operated trust area regional supply network: "we will not survive as a council", (MM-2). This is an area of tension between the municipality and DWAF. The transfer is being phased in: "by 2007 we will be fully in charge of the water network". Mbombela "did not want to take on dilapidated infrastructure……..if it needs refurbishing it must be at DWAF's cost, not our costs, no no!", (Mbombela Municipality ANC Councillor and Political Head of the Finance Committee [MM-C1]). DWAF feels a balance is needed; they do not want the municipality to fail but their resources are equally stretched: "do not expect us to give you a Mercedez

[133] Nelspruit is one of the few growth centres in South Africa (4-5% pa, GNUC-1).
[134] Difficult terrain and poor access roads.

Benz", (DWAF Mpumalanga Chief Engineer Planning and Development [DWAF-MP1]). The DWAF operating subsidy[135] will be transferred to the Equitable Share.

5. WATER SERVICE PROVISION: NKOMAZI MUNICIPALITY

To allow further comparisons, the adjacent municipality of Nkomazi was briefly studied. Like Mbombela, Nkomazi contains large swathes of former homeland areas. There are a couple of former white-only towns, Malelane (1,000 stands) and Hectorspruit (100 stands), but they are small and do not have the revenue generation of Nelpsruit. As a result there is little potential for cross subsidisation. In this respect the situation in Nkomazi is more akin to the area outside the GNUC concession area.

The municipal boundary changes of 2000 meant that an already stretched municipal technical division became responsible for supplying the trust areas: they "suddenly became our problem". The transfer of the DWAF-operated supply schemes in the trust areas was completed in February 2005: "we are running it, they have paid over", (NM-1). The DWAF Chief Engineer for the Province singled out Nkomazi as being a "weak" municipality in terms of technical capacity, (DWAF Mpumalanga Chief Engineer Planning and Development [DWAF-MP1]).

The infrastructure in the trust areas is in a poor state of repair and many are reliant on bore holes and water tankers (there are 10 for the whole municipality), according to the Engineer in charge of supplying the services to the western half of the municipality. There are also infrastructure backlogs; it is estimated that at least 30% of the trust area does not have a basic level of service. Nkomazi borders Mozambique and there are a high number of illegal immigrants in the area which the municipality cannot keep pace with. Water shortages are a real issue in the area: the main storage reservoir was only 14% of capacity at the time of field work. Water shortages are compounded by the proliferation of informal connections: "We do have illegal connections and in the low-lying areas, people leave their taps on…..everyone has got veggie gardens", (Nkomazi Municipality Chief Technical Services West [NM-1]). Outside the white towns, which have meters, cost recovery is not pursued in Nkomazi. Payment levels in the white towns are high at 98%.

Nkomazi has a universal FBW policy on paper but "we have got nothing in place". As there are no meters in the trust areas, the municipality cannot be sure that people are getting a

[135] 2005/06 R33,586 million, R35,903 million 2006/07 and R38,415 2007/8.

basic allocation of water, though there is a suspicion that they siphon off more. In terms of finance, Nkomazi received an Equitable Share of R26.8 million. However, only 40% has been allocated to the operating of basic services (60% "goes on salaries"). As a result the engineer suggests they are "left with nothing to do the job", (N-M1). This again illustrates the issue of the unconditional nature of the Equitable Share.

There are clearly similarities between the Nkomazi area and the area outside the GNUC concession: cost recovery in the white towns is high and there is currently no cost recovery in the trust areas where illegal connections are rife.

6. CONCLUSIONS

Geography has always been an influential factor in levels of service provision of water, in terms of cost recovery, stringency of credit control measures and the operation of informal subsidies, and it will continue to be so for the immediate future:

DWAF was obliged in 2002 to justify to the European Union its sanction of the FBW subsidy, since concerns had been raised by EU donors that the policy "violates a number of their principles of sustainability and will lead to fruitless expenditure on their part", (DWAF,2002j:1). DWAF's argument that FBW is not contrary to sustainability is not altogether supported by the outcome to date.

FBW has undoubtedly achieved much in making water services available to the poor in terms of a basic supply. It has, however, brought certain problems in its wake. FBW is not a simple solution but an immensely complicated undertaking – in its interpretation, its application and management of finance. The study has shown that through miscommunication the FBW has contributed to a culture of non-payment. Non-payment of water services (a combination of affordability and a culture of non-payment) is the biggest threat to the survival of GNUC; should this trend not be reversed, then the future of PSP is bleak. It is interesting to note that Bi-water has had its contract with the Tanzanian Government to supply water to Dar-es-Salaam cancelled in May 2005, just 2 years into the contract, (Vidal,2005). Supplying water to low income areas is a challenge, as this case-study amply illustrates.

It emerged that until there is a dependable and tamper-proof metering system for consumption (yard tanks are an option), and above all effective education in reading and

monitoring the amount of water used, then the poor are not deriving their potential benefit from the FBW subsidy.

The provision of FWB to all in Mbombela has proven not to be financially viable and a decision has been made to return to a targeting subsidy using a means-tested indigent register. The implementation and targeting based on this raises the question over the sizeable numbers of poor illegal immigrants to the area: according to municipal officials they will not be eligible to apply for indigent status and yet denial of water on these grounds could be an infringement of human rights.

It is impossible to escape the conclusion from this case study at least, that the FBW subsidy system is failing to live up to its promise: it has had a negative impact on the operations of GNUC and this could threaten the future of the concession agreement and Mbombela could be left liable for the company's debts. Ultimately FBW has not been of substantial benefit to the poor - the very group the subsidy was originally intended to help.

APPENDIX 1: Stakeholder Referencing Matrix

Reference	Organisation	Position
DWAF-MP-1	DWAF Mpumalanga	Chief Engineer: Planning and Development Mpumalanga
DWAF-N-1	DWAF National – Water Services	Senior Specialist Engineer
DWAF-N-2	DWAF National- Water Services	Deputy Director: Contract Regulation
GNUC-1	GNUC	GNUC General Manager
GNUC-2	GNUC	GNUC Public Relations Manager
GNUC-3	GNUC	GNUC Customer Services Manager
GNUC-4	GNUC	GNUC Town Manager KaNaymazane
GNUC-5	GNUC	GNUC Town Manager Matsulu
MM-1	Mbombela Municipality	Deputy Town Manager
MM-2	Mbombela Municipality	Chief Town Planner
MM-3	Mbombela Municipality	Hazyview Engineering Technician
MM-4	Mbombela Municipality	Deputy Financial Manager
MM-5	Mbombela Municipality	Assistant Director Income
MM-6	Mbombela Municipality	Assistant Director Revenue and Customer Care
MM-C1	Mbombela Municipality	ANC Councillor (Political Head of Finance Committee)
MM-C2	Mbombela Municipality	DA Councillor
NM-1	Nkomazi Municipality	Chief Technical Services West.
TRAC-1	The Rural Action Committee, Mpumalanga	The Director of TRAC Mpumalanga
M-FG	Malekutu focus Group	Focus Group with 5 Households
KaNy-1	KaNyamazane Resident	Multi-Employed Household
KaNy-2	KaNyamazane Resident	Employed Male Headed Household
KaNy-3	KaNyamazane Resident	Female Pensioner Headed Household
KaNy-4	KaNyamazane Resident	Small Business and Male Headed Household
KaNy-5	KaNyamazane Resident	Small Business and Female Headed Household
KaNy-6	KaNyamazane Resident	Multi-Employed Household
KaNy-7	KaNyamazane Resident	Female Pensioner Headed Household, Informal settlement
KaNy-8	KaNyamazane Resident	Unemployed Female Headed Household, Informal settlement
KaNy-9	KaNyamazane Resident	Employed Male Headed Household, Informal settlement
D TA	Daantji and Mpakeni Tribal Authority	Focus group with Traditional Leader and 3 community members
TS-1	Tekwane South Resident	Employed Female Headed Household
TS-2	Tekwane South Resident	Employed Male Headed Household
TS-3	Tekwane South Resident	Unemployed Female Headed Household

TS-4	Tekwane South Resident	Employed Male Headed Household
Mat-1	Matsulu Resident	Female Pension Headed Household
Mat-2	Matsulu Resident	Male Pension Headed Household
Mat-3	Matsulu Resident	Unemployed Male Headed Household
Mat-4	Matsulu Resident	Employed Male Headed Household
Mat-5	Matsulu Resident	Unemployed Female Headed Household, Informal settlement
Mat-6	Matsulu Resident	Employed Male Headed Household, Informal settlement

APPENDIX 2: Subsidy Approaches in FBW Studies. Source DWAF,2002.

Municipality	**Tariff Structure**	**Subsidy Approach and Income Source**
Durban (Metro)	Rising block tariff, zero block 1 (6kl) to all	Internal cross subsidies and service level options
Tshwane (Metro)	Rising block tariff	Targeted internal cross subsidies through indigents policy (in old Pretoria area)
East London	Rising block tariff in East London and a flat charge/kl in Kings Willimas Town	Targeted internal cross subsidies through indigents policy
Hermanus	Rising block tariff, very low block 1	Targeted internal cross subsidies through indigents policy
Polokwane	Urban areas rising block tariff, low block 1	Targeted internal cross subsidies through indigents policy and equitable share
George	Flat rate and declining basic availability charge with service level	Targeted internal cross subsidies through indigents policy and equitable share
Volksrunt	Fixed monthly charge	Targeted rebate to the poor (9kl free) funded from equitable share
Litchenburg	Rising block tariff, zero block 1 to all	Internal cross subsidies (equitable share used for bad debts)
Douglas	Two block regressive tariff	Targeted rebates to the poor (10kl free) through indigents policy from equitable share.
Nkomazi	Fixed charge	No free basic water at present, cross subsidies to areas in old TLC boundaries with low payment rates
Ngqushwa	Flat charge/kl or fixed monthly charge	No targeted subsidies at present but high non-payment rate, equitable share used for general expenses.

APPENDIX 3: GNUC Concession Principles, Fees and Monitoring

It is important to again reiterate that the Nelspruit Concession is not privatisation: all the fixed assets remained the property of the municipality. GNUC is 'entrusted' with the assets during the 30 year contract and will be returned to the Municipality at the close of the contract in a specified condition. Importantly, none of the assets can be sold with out the permission of the municipality, (Kotze,2000:64).

Basic Principles of the Concession:

The contract stipulated that a minimum of R 190 million should be spent on capital project during the first 5 years of the concession (N.B. DBSA loan cam through second half of 2000).

- Penalties would be imposed if the service levels were deemed unacceptable;
- Capital requirements for the project is the responsibility of the concessionaire and at least 25% of all capital spent has to be financed from the concessionaire's own equity whilst the balance may be financed.
- Ay shortfall on the projected capital requirements for the project has to be financed by the concessionaire through sponsor support of the holding company.
- GNUC will is responsible for the billing and collection of payments (differs from the Stuttenheim case where the municipality was charged with billing and cost recovery) from customers and will have the right to apply credit control in those cases where customers refuse to pay;
- GNUC has to take the full commercial risk for the project
- 'Local contractors should be used in the execution of capital projects'

The contract incorporated a number of financial commitments in addition to the capital investment targets. First, a performance fee of R8 million, against contract targets was negotiated. Second, GNUC is expected to pay the municipality R1.25 million per annum, the so called Concession Fee. Third, there was a contract implementation fee of R200,000 payable each year. These fees were renegotiable after 5 years of the contract (this has now taken place). Fourth, GNUC was also required to pay the municipality for the lease of its existing stock of water and sanitation systems/infrastructure, the figure was set at R10.6 million annually. The council used this revenue to service its own debts for the early infrastructure investment. Once the debt had been cleared (10 years) the lease charges would fall to R100 per annum, (Kotze,2000:64).

Monitoring of the concession.

The concession fee and the implementation fee were to be used to fund the monitoring and compliance of the concession by the municipality; the Compliance Monitoring Unit was established. The initial focus of the monitoring unit was technical: was GNUC meeting the extension targets, was the infrastructure of the required standards? Smith et al reports that "the CMU lacked the personnel needed to provide financial oversight and to examine the social side of the contract, namely customer care and the growing problems related to the non-payment of services", (Smith etal,2004:12). "One dedicated official took on the responsibility of monitoring the contract, but this was in addition to the exceedingly demanding responsibilities of being chief engineer for the entire municipality", (ibid:13). After the introduction of FBW, and the growing recognition of the crisis of non-payment, the composition of the monitoring unit has been altered. There is now a focus on social issues (what Kotze terms "the softer side") and 'questions of the affordability of service rates" – it was only then that a full term monitoring unit was established (one full time official and a community liaison officer).

An important issue is there are no national guidelines for a regulatory framework (there is currently "a big debate about whether you should have a national or a local regulator and monitor", (Kotez, quoted in Wellmer,2004:23).

APPENDIX 4: GNUC Capital Investments

Capital works as of the end of 2001 (two years into the concession contract, however the DBSA loans kicks in second half of 2000 – so these are results achieved in around 18 months)

- Total expenditure as of the end of 2001 was R 27 million with a further R 21 million committed to work in progress. ('With the first two years of the programme completed, investments totals R 39 million' GNUC Doc) Planned capital works for the year 2003/2004 amounted to R 24 million. Different figures for capital investment – Wellmer states that according to a GNUC report they had invested R 56 million in the first 18 months of the contract and that the target for the first three years was R 111 million, (Wellmer,2004:34).
- All the water and sewage treatment works have been refurbished and a new sewage treatment works has been constructed at Matsulu, this was to replace "existing unhygienic oxidation ponds". The water and sewer network was also upgraded so that residents in Matsulu had access to water borne sanitation.
- 91 km of new water pipes have been laid and 17.5 km of new sewer mains installed.
- In excess of 4,000 broken meters were replaced and an additional 7,000 new meters were installed (to provide new house connections, thereby formalising illegal connections (removed illegal connections) 'existing unauthorised supplies' – now they have a meter their consumption can be measured and they can be billed!). GNUC also visited over 7,000 stands repaired leaks. As a result these "actions, millions of litres of water have been saved allowing more even distribution and leading to improved pressure and a more consistent supply in many areas".
- The construction of new transfer pump stations in Ka Nyamzane townships has meant that even residents living at higher elevations now receive water. Residents in Ka Nyamazne now received a 24 hour supply of water for the first time (since May 2001). Matsulu in March 2002.
- Matsulu West (population 10,000 – another report says 14,000!!) received fully treated (potable) water for the first time as the result of a new pipeline and pump station. Prior to this households only received chlorinated river water (Crocodile).
- At Mgwenya 5,000 people have house connections instead of standpipes.
- (3,620 water connection points have been replaced
- 4,800 new water connection points have been made)

- Water losses in Nelspruit reduced from 30% to 22%. GNUC also continued to up-grade and expand the network in Nelpsruit itself to keep apace with its continued growth (and development).

In terms of operation and maintenance GNUC state that there has been an improvement in "service delivery in respect of water pressure and service quality has been achieved in the concession area"

- Ka Nyamaznae township "now receives constant reliable water for the first time (80,000)
- Matsulu West (10,000 approximately) receives a potable water supply, where in the past they only received chlorinated water extracted from the Ngwenya River.
- GNUC has saved 3 million litres of water through the elimination of leakages and wastage. (4)
- 41 projects awarded to local contractors, 95 subcontracts awarded to local previously disadvantaged contractors and 1,245 temporary jobs created as a result.
- Permanent GNUC employees have grown from 158, when the GNUC took over, to around 250 by the end of 2001 The trade union concerns over job retrenchment had been misplaced.
- Customer care offices had been established in Ka Nyamazane, Matsulu and Msogwaba – "to provide easy access for consumers to rise inquires, register complaints or pay their accounts".
- GNCU also produced a range of pamphlets and flyers for example 'Water Saving Tips, Level of Service, How to Read your Bill. An effort was made to communicated with consumers but there are questions over how effective their efforts have been.

APPENDIX 5: Township Interview: Income, Status and Water Bills

Ref Code	No. in House-hold	Status	Monthly Income	Average Water Bill	Payment	Debt
KaNy-1	7	4 working adults	R10,00	R100-150	Infrequent contributions	?
KaNy-2	6	Employed headed household	R10,000	R50-80	Pays monthly	None
KaNy-3	2	Pension headed household	R740	R60-80	Infrequent contributions	R1,800
KaNy-4	6	Shopkeeper		For house=R120. Monthly debt repayment on the shop =R350.	R350 per month for the shop debt and R30-40 contribution towards household bill.	R7,000
KaNy-5	2	Self Employed Female headed household	>R10,000	Stays within FBW or marginally over.		None
KaNy-6	3	Three working adults	R10,500	R40-80	Pays monthly	None
KaNy-8	7	Unemployed Female headed household	R170		Never paid	R6,000
KaNy-9	5	Employed Male headed household	R1,570		Never paid	R2,500
TS-1	4	Employed Female headed household	R1,800	R50	Regularly	R96
TS-2	3	Employed Male headed household	R<2,000	R50	Regularly	R1,700 [related to the previous tenants)
TS-3	7	Unemployed Female headed household	R340	Last bill received in June 2004 (R150-200)	Paid the first bill and then stopped	R500 [at least]
TS-4	4	Employed	R<2,000	Last bill	Infrequent	?

		Male headed household. NB this is his 'second' home/family		received in June 2004		
Mat-1	9	Female Pension headed household	R740	Signed an agreement to pay R100 to clear debts	Ceased any contributions on the back of a community decision. Expected to pay R100.	Not sure the amount.
Mat-2	9	Pension headed household	R1580	R50	Try to make a contribution	Unclear
Mat-3	4	Unemployed Male headed household. Informally employed Female	R800	R50	Never paid	*R11,239
Mat-4	10	Employed Male headed household	R>10,000	R200	Contributions of R30-40 per month.	*R13,063 R3,000 on another property

* NB this is for all municipal bills because residents receive a combined bill

ABBREVIATIONS

ANC: African National Congress.

BFW: Basic Free Water.

BFS: Basic Free Sanitation.

DA: Democratic Alliance.

DBSA: Development Bank of Southern Africa

DFID: UK Government Department for International Development.

DWAF: Department of Water Affairs and Forestry.

ES: Equitable Share

GEAR: Growth, Economic And Redistribution (Macro-economic Policy).

GNUC: Greater Nelspruit Utility Company, a joint venture of the British company BiWater/Cascal and a local Black Economic Empowerment company, Sifukile.

MIG: Municipal Infrastructure Grant.

MSP/PPP: Municipal Service Partnership/ Public-Private-Partnership.

RDP: Reconstruction and Development Programme.

TLC: Transitional Local Council.

SALGA: South African Local Government Association.

SANCO: South African National Civics Organisation.

SAMWU: South African Municipal Workers Union.

VIPs: Ventilated and Improved Pit-latrine.

WSA: Water Service Authority.

WSP: Water Service Provider.

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