Are South Africa's water service delivery policies and strategies equitable, accessible, affordable, efficient, effective and sustainable for Msunduzi low-income households?

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ABSTRACT

Are South Africa's water service delivery policies and strategies equitable, accessible, affordable, efficient, effective and sustainable for Msunduzi low-income households? The primary objective of this study was to elicit the community experience of South Africa's water service delivery policies and strategies and link these experiences to a broader analysis of policy and strategy to locate water service delivery contraventions, inconsistencies and inadequacies. The secondary objective was to initiate community-based platforms for engagement with water-related issues and build capacity within local community task teams to initiate lobbying and advocacy strategies to support community-suggested and research-outcome reforms thereby returning popular control to the locus of communities.

The study was conducted in Kwa-Zulu Natal, within the Msunduzi municipal jurisdiction, under the uMgungundlovu district municipality (DC22) in the period from October 2002-April 2003. Households in five low-income urban areas were included in the study: Imbali (units 1 and 2), Sobantu, Haniville and Thembalihle. The study employed a community action research design using non-probability sampling. Surveys, conducted by community researchers, were complemented by broad community engagement approaches, informal interviews with external stakeholders and the initiation of platforms for information sharing and fundamental debate.

The study revealed two significant findings. The first finding found that South Africa's water service delivery policies, strategies and implementation mechanisms were inconsistent with the Department of Water Affairs and Forestry's sector goals of equity, affordability, efficiency, effectiveness and sustainability. They contained serious

scientific and social inadequacies, inequitably promoted economic considerations above social and environmental considerations; lacked regulation and monitoring systems to identify and address implementation contraventions; were not receptive to the socio-economic situations of low-income households and should be fundamentally re-worked. Policies and strategies purported to ensure that the basic water service requirements of low-income households were met, essentially compounded socio-economic constraints and compromised human rights, justice and equity. The second finding was related to popular involvement and engagement. Community consultative processes for input into local and national policies and strategies were inadequate and often pseudoparticipatory; political platforms (local and national) for communities to engage and influence decision-makers were inadequate or lacking; and the community control, ownership and acceptance of the Msunduzi water service delivery institution and its mechanisms were low.

Recommendations for the reform of policy, strategy and implementation of such reforms were advocated through the vehicle of reviews, evaluations and audits, to inform the necessary amendments, adjustments and intensification of local and national regulation and monitoring mechanisms. Lobbying and advocacy strategies, to support the implementation of reforms, were promoted through community-based approaches of popular engagement with water-related issues, information dissemination, community mobilisation and popular control of public processes.

DEDICATION

My uncle and friend, Anthony Field, wherever you are, I hope that your spirit is barnacled to the breeze.

DECLARATION

I hereby declare that the research in this thesis is of my own investigation. Where use has been made of the work of others, this has been duly acknowledged in the text.

The financial assistance of the National Research Foundation (NRF) towards this research is hereby acknowledged. Opinions expressed and conclusions arrived at are those of the author and are not necessarily to be attributed to the NRF.

Signed: JA Smith Date: 30/10/2003

JA Smith

As research supervisor I agree/do not agree to submission of this thesis

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CHAPTER 1
THE PROBLEM AND ITS SETTING

1.1 Introduction

The emergence of the new South African democracy (1994) brought with it the assurance of making clean drinking water and sanitation accessible to all South Africans (Human Sciences Research Council [HSRC], 2002; Rural Development Services Network [RDSN], 2002). The 1994 Reconstruction and Development Programme (RDP), the African National Congress's (ANC) election manifesto, ensured that advances were made in the rollout of service infrastructure and the redressing of South Africa's skewed water distribution and consumption legacy (HSRC, 2002; RDSN, 2002). However, in 1996, the neo-liberal Growth, Employment and Redistribution strategy (GEAR) replaced the RDP, subsequently steering South Africa away from a developmental state, to a state whose aim was to facilitate profitability and investment in the private sector (Pauw, 2003; HSRC, 2002). 'The effects of GEAR cascaded downward to local government and service delivery regimes' (HSRC, 2002 p1). GEAR's policy of fiscal discipline resulted in a reduction of direct subsidies from national government to municipalities (HSRC, 2002). As many municipalities had a limited tax-base or alternative source of income, 'unfunded mandates' were created concurrently with changing policy guidelines and legislation, pressurising local authorities to recover costs (HSRC, 2002; McDonald, 2002). These pressures were transferred to citizens and their households (HSRC, 2002).

Despite progressive policy reforms, as indicated in the White Paper on National Water Policy for South Africa (1997), affordability constraints prevented the majority of low-income households from accessing sufficient water to meet basic domestic needs (Bond, 2001). In 2001, a Human Science Research Council survey found that across the country, impoverished residents were forced into a position where they could not afford basic services or payment of arrears, 'no matter how hard they tried' (HSRC, 2002 p1). This was consistent with the findings from a national survey, involving 2520 households, which found that basic municipal service charges typically represented a quarter to a half of total household income for 57 percent of the households surveyed (Bond, 2001). Median costs for water, electricity, sewage and refuse removal ranged from R224-R400 per month. Municipal service expenditures left little monies for other

necessities, such as food, school fees, transport and medical expenses (Bond, 2001). While many government and business leaders blamed arrears on a "culture of non-payment" (emanating from the boycott on services during the struggle against apartheid) the reality was that poverty, HIV/AIDS and the loss of 500 000 jobs (between 1996-2001) made it increasingly difficult for households to afford basic service expenditures (HSRC, 2002; Bond, 2001; Fiil-Flynn, 2001; Ralo et al, 2000). Households became increasingly vulnerable as they struggled to secure basic services (HSRC, 2002; Bond, 2001; Fiil-Flynn, 2001; Ralo et al, 2000). Instead of acknowledging the affordability challenges of low-income households and responding in a proactive manner, national and local government implemented punitive measures for any inability to pay and arrears on service accounts (HSRC, 2002). This resulted in the disconnection of water services and the eviction of millions of low-income households from their homes with the implications of compromising health, livelihoods and policy objectives (Bond, 2002; HSRC, 2002; Fiil-Flynn, 2001). Such actions, based on the economic considerations of full-cost recovery and a stable financial bottom line, failed to acknowledge the benefits of affordable and accessible basic service coverage, which include the following: a net improvement in the immediate local environment of the poor; improved public health standards; fewer hazards associated with fire; increased gender equity; improved productivity on the part of workers; improved capacity to learn on the part of youth; greater chances for class desegregation; and many economic spin-offs from those who used services for income-generating purposes (Fiil-Flynn, 2001). Failure to integrate the social benefits of universal basic services into cost-benefit analyses was, in light of the above benefits, shortsighted and socially irresponsible (Fiil-Flynn, 2001).

A landmark victory in the case of Irene Grootboom, a shack dweller in Cape Town, challenged the government to provide the poorest sectors of society with at least a lifeline supply of basic services:

"A society must seek to ensure that the basic necessities of life are provided to all if it is to be a society based on dignity, freedom and equality...For a person to have access to adequate housing depends on context...Some may need access to land and no more; some may need access to land and building materials; some may need access to finance; some may need access to services such as water, sewage, electricity and roads" (Grootboom v Republic of South Africa, 2000; cited by Fiil-Flynn, 2001).

The Grootboom case together with increasing pressure from low-income groups and social movements in South Africa forced the government to review the rights afforded to South African citizens as stated in the constitution and White Paper on National Water Policy for South Africa (1997)[1]. The implementation of the free basic water policy followed, in 2001, which was envisioned as ensuring the access of lifeline services to low-income households. The free basic water policy was, in the eyes of social justice proponents, a positive step towards addressing basic water affordability and accessibility objectives (in respect of basic human needs and consistent with the White Paper on National Water Policy for South Africa, 1997). The free basic water policy is consistent with the Constitutional Court, Reconstruction and Development Programme (RDP) and the Bill of Human Rights; where only the water required for meeting basic human needs and maintaining environmental sustainability will be guaranteed as a right (Fiil-Flynn, 2001; Ralo et al, 2000; White Paper on National Water Policy for South Africa, 1997). This is known as the 'reserve' or 'minimum core right' and in the case of free basic water represents the entirety of the right itself (Calland, 2002; White Paper on National Water Policy for South Africa, 1997).

However, despite being heralded internationally, the free basic water policy has not been implemented in the spirit in which it was conceived. It falls short of policy objectives and has numerous policy flaws (NGO, 2003). Free basic water is allocated per household and not per person; the allocation of 6 kilolitres (kl) of free water per household per month does not meet basic water requirements per person per day and ignores household size and the special water requirements of children, the aged and people living with HIV/AIDS (Alternative Information and Development Centre [AIDC], 2002; Public Citizen, 2002a; Fiil Flynn, 2001; Ralo et al, 2000; Gleick, 1996). Because the free basic water allocation fails to meet basic water requirements, it is conceivable that households may need to use more than the 6kl allocation. According to the policy, if more than 6kl is consumed then the full 6kl must be paid for and any additional water consumed is charged at a higher stepped tariff. Hence, free basic water

[1] The South African constitution guarantees all people the right to access adequate and affordable potable water to meet basic domestic needs and water and sanitation services should be delivered equitably, affordably, effectively, efficiently and sustainably to satisfy sector goals (DWAF, 2002; De Waal et al, 2001; White Paper on National Water Policy for South Africa, 1997). Government is instructed to "take reasonable legislative and other measures within its available resources to achieve the progressive realisation" of these rights (White Paper on National Water Policy for South Africa, 1997).

is neither free nor basic and low-income households remain in a position whereby they struggle to access and afford the basic life-line of water necessary for survival (AIDC, 2002). Free basic water is based on a cost-recovery model, which is prominent in the water delivery paradigm. Such mechanisms if applied to water, may undermine its affordability, access and compromise the objectives of national policies and strategies (RDSN, 2002).

This research challenges the discrepancies between legislation, policy, strategy and safeguarding of basic human rights in respect to the affordability and accessibility of basic water services. It questions the appropriateness and effectiveness of pro-poor policies in upholding the minimum core rights as recognised in the South African Constitution. It contests that the economic bottom-line is being driven, regardless of social justice, equity and the realisation of basic human rights, by promoting full-cost recovery and profit margins. It is acknowledged that service delivery does carry a cost. However, this cost should not be unfairly and inequitably transferred to low-income households. National and local government have a role in ensuring that mechanisms are implemented to safeguard the rights and livelihoods of low-income households. Primarily, this research seeks appropriate pricing mechanisms, public sector reforms, and policy and strategy amendments to ensure that municipal service delivery is equitable, accessible, affordable, efficient, effective and sustainable to low-income households.

1.2 Importance of the study

The study's importance is divided into two objectives: that of (1) assessing the equity, accessibility, affordability, efficiency, effectiveness and sustainability of South Africa's water service delivery policies and strategies and (2) the role of community engagement and action in supporting policy and strategy reforms.

There exists a "national crisis in the affordability of basic municipal services" (Bond, 2001). This has been illustrated by mass mobilisations of citizens across South Africa advocating reformed pricing strategies, especially in the outlying regions of Cape Town, Durban and Soweto. Households simply cannot afford to pay for their basic municipal service charges (Bond, 2001; Fiil-Flynn, 2001; Ralo et al, 2000). The importance of this study is *therefore* located within the pocket of low-income households and asks the

question: what can households afford to pay in order to secure their water service delivery? It draws critical links between water service affordability, user-satisfaction with water service delivery and the degree of participation by communities in water service delivery strategies. It challenges the appropriateness and efficiency of water service delivery tools. It challenges the lack of information provided to households in being able to read meters and water bills. It questions the Msunduzi municipality's water demand management strategy. It contests the municipality's commitment and prioritisation to ensure the delivery of free basic water to low-income households, and advocates that the national free basic water allocation of 6kl per household per month is inadequate for a lifeline supply of water. The study asks, "is disconnection or restricted access of services an acceptable form of credit control?" It advocates the integration of public health benefits into cost benefit analyses of universal service coverage. It highlights options and alternatives for improving and extending public service delivery reforms. The study also highlights the need for a progressive and redistributive tariff system if the government is to succeed in its affordability, accessibility and sustainability mandate. Lastly, it is valuable in assessing if national and local government policies and strategies are fundamentally entrenched in social justice and equity.

Community engagement and action is reflected in every stage of the research and forms the locus in the importance of the study. Efforts were made to build organisational and knowledge capacity in community researchers and to engage in debate on fundamental water issues and water-related policies and strategies. Platforms were created (where they were absent) or optimised (where they already existed), to support this process and ensure that community voices were heard. Community engagement and action is essential to take the outcomes of the research forward and to contribute to popular alternatives in the water service delivery framework.

The study area was within the Msunduzi municipal jurisdiction, under the uMgungundlovu district municipality (DC22). The study targets households in five low-income urban areas: Imbali (units 1 and 2), Sobantu, Haniville and Thembalihle. Community researchers were purposively selected and engaged in methodological compilation, data collection, data analysis and strategising, to provide suggestions for

the reform of policies, strategies and implementation processes and to advocate the implementation of the envisioned reforms.

1.3 Value of research

The expected value of the research is provided to ensure that the results address and satisfy the research objectives.

The expected value of the research is the following:

- Gain input into assessing whether South Africa's water service delivery policies and strategies are equitable, accessible, affordable, efficient, effective and sustainable for Msunduzi low-income households
- To ascertain how much low-income households are willing and able to pay to secure water access
- Gain insight into the experience of low-income households to the free basic water policy
- Gain insight into how a progressive redistributive tariff system should be structured
- Gain insight into how communication between communities, councillors, ward committees and municipal officials could be improved
- To provide recommendations for public sector reform
- Gain insight into advocacy channels for communities to engage in and take outcomes forward

The major expected value of the research is to capacitate community committees, to encourage advocacy, to feed in to policy and local strategy so that low-income households are not disadvantaged. In order to achieve this goal, the results of the study will be discussed with households included in the study, as well as with the wider communities. Community task teams will be set up to include community researchers, households (included in the study) and their wider communities. Additional information on major issues pertaining to the results of the study will be disseminated and discussed through community task teams. Communities will identify advocacy channels and joint community advocacy strategies will be adopted. Community advocacy strategies will be fed into national advocacy networks (through social movement campaigns) to support and strengthen advocacy at local and national levels.

The wider value of the research is expected to be the amendment or transformation of local and national policies to promote social water justice in the water service delivery to low-income households. Furthermore, the water service delivery experiences of Msunduzi low-income households are to be shared with other low-income communities to mobilise for the advocacy of receptive and appropriate policies for the improved service delivery of water.

1.4 Statement of the problem

Are South Africa's water service delivery policies and strategies equitable, accessible, affordable, efficient, effective and sustainable for Msunduzi low-income households?

1.5 Sub problems

Sub problem 1: What is the experience of Msunduzi low-income households to local government (municipal) water service delivery?

Sub problem 2: Are local and national water service delivery policies and strategies equitable, accessible, affordable, efficient, effective and sustainable in servicing Msunduzi low-income households?

Sub problem 3: What reforms can be made to national and local water service delivery strategies to ensure the equitable, accessible, affordable, efficient, effective and sustainable water service delivery to low-income households?

Sub problem 4: What strategies can be adopted to support the implementation of the necessary reforms to South Africa's water service delivery policies and strategies?

1.6 Hypothesis

South Africa's water service delivery policies and strategies are not equitable, accessible, affordable, efficient, effective and sustainable for Msunduzi low-income households.

1.7 Guiding principles

The study is guided by the following principles (consistent with the Global People's Forum, Water Commission Statement, 2002):

(1) Access to water and sanitation are basic human rights. Everyone should have secure access to sufficient safe water and sanitation to meet their basic human needs.

(2) Water is a public necessity. It should not be commodified or privatised.

1.8 Study parameters

The impact of national and local water-related policies and strategies on communities was limited to the experiences of Msunduzi low-income households and not to low-income households nationally, with the implication that the study results could not be applied nationally. Individual household municipal consolidated bills were not accessed thereby demanding the reliance on Municipal average household consumption statistics. There was no differentiation between the seasonal usage of water services: this could have a significant effect on the quantities of water utilised as well as the available household income and expenditures. Only low-income peri-urban households were included in the study; which excluded the comparison of national and local policies and strategies on rural low-income households. Industrial and commercial water consumption and the potential for cross subsidisation between different categories of users was not included in the study. Municipal documents and statistics were not readily accessible thereby compromising the triangulation of municipal data with community obtained data. The researcher's own position has been expounded earlier (consistent with section 1.7) yet positions will be stated and efforts made to remain objective.

1.9 Definition of terms

Accessible	not restricted or constrained; easy to obtain by all
Affordable	no one is excluded from access to basic services because of the service cost (Draft White Paper on Water Services, 2002 p8)
Amicable	used to refer to mutually acceptable or favourable terms
Basic municipal services	water, electricity, sanitation and waste removal services
Equitable	adequate services to all people, fairly (Draft White Paper on Water Services, 2002 p8)

Effective	the job is well done (Draft White Paper on Water Services, 2002 p8) and physically reaches all people
Efficient	resources are not wasted (Draft White Paper on Water Services, 2002 p8)
Free Basic Water	a free lifeline of 6 kilolitres per household per month
Full- cost recovery	includes all costs relating to operating, maintenance, capital and extending service delivery
Indigent policy	targeted subsidy, which provides limited free basic services to low-income households
Privatisation	a range of private sector activities, including outsourcing and introduction of private sector principles, such as performance-based management and full-cost recovery into service delivery reforms. Corporatisation of services is also included in this definition (McDonald, 2002 p1)
Sustainable	there are adequate resources to operate, maintain, rehabilitate and expand services in the future (Draft White Paper on Water Services, 2002 p8)
Water Services Authority	municipalities
Water Services Provider	municipalities, parastatals, non-governmental organisations or community-based organisations

1.10 Abbreviations

Abbreviations for the study are provided below.

ANC	African National Congress
CAR	Community action research
CRs	Community researchers
DPLG	Department of Provincial and Local Government
DWAF	Department of Water Affairs and Forestry
FBW	Free Basic Water
GEAR	Growth, employment and redistribution strategy
IMF	International Monetary Fund
Nepad	New Partnership for Africa's Development
NGO	Non-governmental organisation
RDP	Reconstruction and Development Programme

TNCs	Transnational Corporations
WB	World Bank
WHO	World Health Organisation
WTO	World Trade Organisation

1.11 Assumptions

No political interference will occur in the research during the period of data collection. Although, community researchers are purposively selected on the criteria of community activism, data will be objectively collected. Community researchers will engage with the research process and take the research outcomes forward using community identified channels. Government and municipal officials will be accessible and willing to participate in interviews and provide relevant data.

1.12 Summary

This study aims to assess whether South Africa's water service delivery policies and strategies are equitable, accessible, affordable, efficient, effective and sustainable for Msunduzi low-income households. The background and objectives of the study has been captured through the problem and its setting; the importance of the study; the value of the research; the statement of the research problem; the four sub problems; and the guiding principles. Further development for the social justification of equitable, accessible, affordable, efficient, effective and sustainable policies and strategies are presented in chapter two. The study methodology, data collection techniques and capacity building anticipated, are described fully in chapter three. The characteristics of study areas, households, water consumption patterns, community researchers and external stakeholders are presented in chapter four. The results and discussions of the study are laid out in chapters five, six, seven and eight. Chapter nine presents the conclusions and recommendations for the study and possible improvements and implications for further research.

CHAPTER 2
REVIEW OF RELATED LITERATURE

2.1 Introduction

Water is a social and ecological necessity and it is essential for life. Access to water is a fundamental human right to meet human needs and sustain livelihoods. It is public trust to be guarded by all levels of government and enshrined in national constitutions and international agreements (Bond 2002; Global People's Forum, Water Commission Statement, 2002). These principles govern the argument for the social, equitable and common trust of water presented in this research. The impact of global neo-liberal policies and international institutions on national and local policies and strategies are explored and the instruments of privatisation, corporatisation and cost recovery are considered in light of the increasing push towards the non-state delivery of water. Economic variables and market forces, promoted by the dominant global economic paradigm, applied to the resource and service delivery of water are expounded on through their impact on social justice and equity imperatives. The responsibilities and accountabilities of government to its citizens are considered in relation to the privatisation and takeover of public sector delivery systems. Core to the discussion is the issue of national and international finance options, which include the pricing and subsidisation of water delivery. The research engages the South African context, in relation to the dominant paradigm, with particular reflection on the structure and regulation of water service delivery systems, financial frameworks, policy initiatives and water disconnections. Public sector alternatives and strategies for challenging the inflexible global paradigm and national policies are examined.

2.2 Right to water

The South African constitution guarantees all people the right to access adequate and affordable potable water to meet basic domestic needs; and 'water and sanitation services should be delivered equitably, affordably, effectively, efficiently and sustainably to satisfy sector goals' (Draft White Paper on Water Services, 2002 p8; De Waal et al, 2001; White Paper on National Water Policy for South Africa, 1997). Rights, as argued by Calland (2002), often represent a minimum core (tangible minimum that is available to all, without contest), which often represents the entirety of the right itself. "The right to water is not an

absolute right- it is subject to specific obligations such as payment for services (over and above the basic amount) and the limitation or disconnection of the services in certain circumstances" (Draft White Paper on Water Services, 2002 p33). The South African government 'is to take reasonable legislative measures within its available resources to achieve the progressive realisation of these rights' (Draft White Paper on Water Services, 2002 p33). It is argued, that 'progressive realisation of these rights' provides leeway for government to implement the rights in the time frame that they see fit, as well as on the condition of resource availability (South African Municipal Workers Union [SAMWU], 2003). However, the duty to 'take steps' together with the obligation to guarantee the right to non-discrimination and equality, mutual respect and protection (Office of the High Commissioner for Human Rights, 2002 Art. 2.2), constitute obligations of immediate effect (Office of the High Commissioner for Human Rights, 2002). Retrogressive measures taken in relation to the right, or failure to exercise due diligence to prevent retrogressive measures taken by third parties, are prohibited under the Economic, Social and Cultural Covenant (Office of the High Commissioner for Human Rights, 2002).

2.3 Global neo-liberal policies and institutions

Globalisation implores us to view water service delivery and water resources within the current international paradigm as it has implications for national and local water service delivery strategies. The pressure exerted on South Africa by the World Trade Organisation (WTO) to ratify the General Agreement on Trade in Services; the provision of funding by the Bretton Woods Institutions on condition of privatising public services; South Africa's economic policy: the Growth, employment and redistribution strategy (GEAR) and the New Partnership for Africa's Development (NEPAD) which are based on cost-recovery mechanisms; as well as transnational corporations eager to win service contracts in South Africa, have implied that profit-motives are increasingly attached to water services. "The immediate effect of the world now implementing privatisation programmes or vast global sell-off of public services, is the creation of a global buyer's market." Hence, in a neo-liberal environment, water is anyones' business, public control is declining and the rights to ownership and management of basic resources are equal for local and international entities (Keet, 2000b p16).

The Doha Declaration, arising from the November 2001 round of WTO negotiations, calls for the inclusion of all 'environmental services' in the WTO trade rules (Blue Planet Project, 2002 p1). This means that water services will be targets for transnational companies wanting to use WTO rules to force the privatisation of water services (all countries that fall under the WTO are obliged to conform and accept WTO rules and agreements). Under the WTO, water is seen as a commodity in the global market place, a tradable good, and as a private business (Blue Planet Project, 2002). The WTO can therefore promote the privatisation of public water services, economic considerations may compromise human rights or environmental protections, and 'unfavourable' local laws that govern transnational corporations can be overturned and adapted (Blue Planet Project, 2002 p1). Incoming WTO Director General Supachai Panitchpakdi was quoted as saying, "We are now approaching a new era. The WTO is used to dealing with only external issues and now is the time to deal with the domestic regulations that impede trade liberalisation" (Blue Planet Project, 2002 p2). Hence, laws that ensured social services and the safeguarding of water can now be ruled as 'non-trade barriers' and abandoned. This includes subjecting domestic laws (municipal laws) to the power of the WTO. Hence, the implications of macro-economic or tight fiscal constraints place direct adverse pressures both on capital investment and operating budgets of public services (Keet, 2000a). Furthermore, WTO rules provide for the transfer of public water services into private hands, thereby decreasing public control of an essential resource (Blue Planet Project, 2002 p2).

World Bank and International Monetary Fund policies are at the forefront of instituting private sector water delivery (Blue Planet Project, 2002). The International Monetary Fund frequently makes water privatisation and cost recovery a requirement of its structural adjustment loans, and these requirements then become conditions for additional loans (Blue Planet Project, 2002; Hall, date unknown). The privatisation agendas of the World Bank and International Monetary Fund are made apparent by a recent study highlighting that International Monetary Fund loan agreements in 12 out of 40 countries included conditions imposing water privatisation and full cost recovery. The World Bank's portfolio for water projects currently accounts for 14% of its lending; and international private investments in water supply to developing countries, virtually nil before 1990, increased to $25 billion by the end of 1997 (Streeter, 2002; Hall, date unknown). It is not surprising, therefore, that

many groups are lobbying for development agencies and institutions to not force privatisation through requiring public water systems to be privatised as a condition for receiving loans or debt relief (Public Citizen, 2002b). The World Bank has privatisation as its core policy, which is evident by its 'Private Sector Development Strategy,' which promotes private sector involvement in basic service delivery (Hall and Bayliss, 2002 p2). The World Bank makes little effort to address alternative public sector approaches. Instead, lending frequently carries the conditions of private sector service delivery. It would be surprising if the public sector could not extend infrastructure services if they were provided with the same support and resources (in terms of finance and guarantees) that are made available to the private sector (Hall and Bayliss, 2002). However, the World Bank ignores the success of well-structured public sector reforms, based on democracy and popular administration commitment, which have extended infrastructure services significantly and achieved recognised success. The South African rural electrification programme is an example of such success after 1994, which reduced the number of homes without electricity from 65% to 30% by 2000 (Hall and Bayliss, 2002).

2.4 Privatisation

Around the world, transnational corporations are pursuing one of the last frontiers for profit making: privatising water services (Public Citizen, 2002b). "Some industries should never be privatised, and water is one of them," says Jamie Dunn, water campaigner of Blue Planet, a Canadian NGO (cited by Streeter, 2002 p18). "Businesses are not in the benevolence business, their first obligation is to their shareholders and to make a profit. That's the wrong motive when we're talking about water, a basic human right" (cited by Streeter, 2002 p18). Business efficiency or pursuit of profit, if left to itself, can be extremely damaging in social and environmental terms and ultimately unsustainable (Keet, 2000b). However, despite the fault line between those seeing water as a right and those seeing water as an economic good, the 'blue-gold rush' continues unabated, with the private sector seizing water supplies and water resources, from global to local levels (Overseas Development Institute, 2002 p3). The domination of the water utility market is headed by six major transnational companies and by 2010 are expected to increase their overall share in markets worth $20bn in Africa, Asia and Latin America. By this time, the private sector will account for between 20% and 60% of all water and sanitation services

supplied in these continents (Overseas Development Institute, 2002). The two dominant global water corporations are French transnationals: Vivendi and Suez (Bond 2002; Hall, date unknown). Ranked 51st and 99th among the Fortune's Global 500 list, these two water giants capture nearly 40% of the existing global water market share, providing water-related services to over 100 million people each. Vivendi operates in over 100 countries and Suez in over 130 countries with their combined annual revenues over $70 billion (including $19 billion in water and waste services) (Bond 2002). The total global water market accounts for approximately 4 trillion US dollars per year (Bond, 2001). The South Africa government has not escaped privatisation's clutches and is one of 29 countries targeted by European multinational corporations to support more privatisation and the deregulation in many public service sectors- including water, waste and energy services (Polaris Institute, 2002). Table 2.1 provides a visual depiction of the rapid rate of privatisation of water and sanitation services globally.

Table 2.1: Projected proportion of water and sanitation services privatised globally for 1997-2010 (Streeter, 2002 p19, citing Vivendi 2002).

Region	% Services privatised 1997	% Services privatised 2010	Value of Privatised Market (US$, billion)
Western Europe*	20	35	10
Central and Eastern Europe	4	20	4
North America	5	15	9
Latin America	4	60	9
Africa	3	33	3
Asia	1	20	10

*Excluding France and UK

The disappointing performance of governments in water service delivery (characterised by low coverage rates, high water loss rates, low levels of cost recovery and poor quality of water provided), coupled with the substantial market possibilities of water, has led to a surge of private sector investment in water services (HRH Prince of Orange, 2002; Streeter, 2002). Discourse in the privatisation debate states that privatisation of water-service provision does not imply privatisation of water resources- just the service delivery (HRH, Prince of Orange, 2002). However, when privatisation exists and profit motives are implemented, it is both the service delivery and the water resources that are privatised (citizens pay for the service delivery and the water). In a case study of the Delhi Water

plant, India, the private company (Suez-Degremont) sourced the water free but the rural citizens had to pay the full economic, social and environmental costs of the water resource[1] (Shiva, 2002). Deregulation of once-sacred public services, such as electricity and health care, provided a lucrative precedent. International and national organisations have emphasised private sector provision of municipal water services as a potential solution to the major problems in the sector as well as providing the 'carrot' incentive to private companies of the potential to make substantial profits. Private companies were seen by many, and saw themselves, primarily in a saviour role, capable of bringing market discipline and the principles of competition and productivity to a government sector of ineptitude (Streeter, 2002). It was acknowledged that private sector resources, applied skilfully and conscientiously, could lift a huge burden from the shoulders of governments and transform the lives of citizens (Streeter, 2002). Consequently, governments in many developing countries have signed long-term contracts for the private provision of these services in major metropolitan areas (HRH Prince of Orange, 2002). Most of these contracts have been awarded to major consortia with European multinational companies as partners, owing to the massive scale of investments and services required. This is proving problematic as, not only are the profits returning to international coffers or to subsidise other global investments, but water services are not continually subject to powerful market force competition. The contract holder usually becomes a monopoly on services for, in most cases, decades and unsatisfactory concessions are often difficult to terminate (Streeter, 2002; Keet, 2000b; Hall, date unknown).

One of the core arguments made in favour of privatising municipal services is that the private sector is more efficient than the public sector, thereby reducing costs to the end user and freeing resources for the state to be used for development needs (Hall, date unknown). A second argument for privatisation is that it generates better public accountability. The contrary has been shown in national and international research.

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[1] The water for the Suez-Degremont plant in Delhi was sourced from the Tehri Dam. The dam had displaced 100 000 people (many of them farmers, who lost both their land and access to water). The dam cost millions of rupees to build and was built on a seismic fault in the ecologically fragile Bhagirathi Valley (Shiva, 2002).

Trends in extensive international research indicate that privatising municipal services results in an increase in prices, a deterioration of service quality and the reluctance of private corporations to extend services to the poor (Hall, date unknown). Such was the case in the Puerto Rico concession with a Vivendi subsidiary called Compania de Aguas, where water access decreased; maintenance, operating and monitoring systems deteriorated; customer service declined and financial mismanagement occurred (Hall, date unknown). Research is revealing more variable results and problematic economic effects of privatisation than the initial efficiency theories predicted, even in the more developed countries of the Organisation for Economic Co-operation and Development (Martin, 1995 cited by Keet, 2000b p16). There is a lack of transparency, decisions are taken in secret, public debate is minimal, and independent regulators and monitors are co-opted by private sector influences and are often effectively marginalised (Hall and Bayliss, 2002; Hall, date unknown). Although it is recognised that corruption occurs in public service undertakings as well, privatisation erects greater barriers to transparency, the size and scale of the business opportunities involved provide companies with greater incentives to pay bribes, leading to 'state capture' and corruption by private companies. A simple but acute example of private sector deceit is where transnational corporations mimic local languages or names to make their companies more acceptable to local countries e.g. 'Siza Water,' a subsidiary of Saur International, of France, operating in the KwaDukuza Municipality, KwaZulu-Natal (Bond, 2002). Contract documents for water concessions frequently have secrecy clauses written into them, are protected by commercial confidentiality and contract negotiations are conducted behind closed doors (Pauw, 2003; Hall and Bayliss, 2002). A senior water manager, working for the City of Cape Town (2002), described the force of private multinational corporations in pushing for private sector contracts, in the following statement, "Lyonnais des Eaux has come knocking on my door on two occasions. These French water companies have become too powerful to resist. The take over is inevitable" (cited by McDonald, 2002 p27).

Although this paper's argument and research indicates that increasing globalisation, faster economic growth and privatisation are unsustainable at every level and infringe on the rights of citizens, many countries, including the South African government, are buying-in to the current paradigm (Grusky, 2002 cited by Bond, 2002; RDSN, 2002). To illustrate an

example of the degree of pro-privatisation bias, Nelson Mandela, former president of South Africa, stated that 'privatisation is the fundamental policy of our government. Call me a Thatcherite, if you will' (cited by Bond, 2001). It is therefore disconcerting that recent efforts to dull the privatisation drive have been thwarted as the fresh water outcomes of the World Summit on Sustainable Development failed to institute efforts to limit or regulate privatisation.

2.5 Public sector inefficiencies

There is an assumption that wherever privatisation occurs, it is the result of the inefficiency of the previous public sector provider (Hall, date unknown). This assumption is not always true. Public service delivery can be just as efficient and effective as private sector delivery (HRH Prince of Orange, 2002). Public sector provision of water and sanitation is not in itself a cause of inefficiency or an inferior basis for service delivery (HRH Prince of Orange, 2002). Ninety five percent (95%) of municipal water services are provided by the public sector, including in the USA, Europe and Japan (HRH Prince of Orange, 2002; Streeter, 2002). Indicators show that public sector undertakings compare well with their private sector counterparts and many public sector institutions have achieved major efficiency gains, without privatisation or public private partnerships (Hall, date unknown). This is evident in Sao Paulo, Brazil; Lilongwe, Malawi; Sri Lanka; Hydrebad, India; Debrecen, Hungary and Tegucigalpa, Honduras where public sector reforms have increased access, public accountability, reduced unaccounted for water usage and water charges (Hall, date unknown).

Public sector 'inefficiencies' are not the sole reason for considering private sector options. Privatisation may be considered to reduce government debt and improve municipal balance sheets (Hall, date unknown). Privatisation is expected to benefit national government or municipal finances by using the proceeds of a sale to reduce their debts or deficits. However, this can conflict with the financial needs of the water service itself, because the cost that a company is willing to pay to obtain a concession will depend on the profit stream that the private company can expect, which sequentially will be affected by the price it charges to users, and how generous the operating conditions are (such as the regulation mechanisms present). Therefore, what is good for the government's finances is not

necessarily best for water users and taxpayers (Hall, date unknown). Hence, schemes are often designed that are amicable and affordable to governments and local municipalities, rather than to households (Hall, date unknown). A stark example of such activities is illustrated by the Budapest water supply concession (1997), which was awarded not to the consortium which offered the most reasonable price for water, but to the consortium- led by Suez-Lyonnaise and RWE- "which promised the council an extra 3 billion florints in payment- although the price of water to consumers was higher by 3 florints per cubic metre than any another bid" (Hall, date unknown, p9). An additional example of privatisation's negative effects on water users is that private companies often do not provide investment in desperately needed restructuring, rehabilitation and expansion of service utilities, as was shown in La Paz, Bolivia. This is an important consideration, considering that not all citizens are connected to national reticulation systems, especially in South Africa and other developing countries. Research also illustrates that when one of the motives is raising money to finance municipal budgets, there is an unscrupulous motive to privatise the most financially efficient water undertakings, as they will obtain a higher level of cost recovery and subsequent profit margins (Hall, date unknown). Hence, the phrase, "cherry picking or red-lining," whereby contracts are designed for private companies to take the most profitable aspect of water supplies, leaving governments with the most expensive service areas (usually rural communities) thereby reducing the scope for cross-subsidisation- the traditional foundation for universal public services (Hall and Bayliss, 2002). McDonald (2002) argues that the most revealing indication of privatisation impulses driving urban policy in central government is the fact that there is no parallel organisation to the Municipal Infrastructure Investment Unit[2] at a national level to promote and conduct research on how best to improve and extend public sector service delivery.

2.6 Corporatisation of water services

"In many countries, government authorities and the management of state enterprises are faced with trade union and broader public opposition to privatisation" (Keet, 2000b p17).

[2] The aim of the Municipal Infrastructure Investment Unit (MIIU) is to promote and optimise private sector involvement in municipalities (local government). The MIIU has been active in promoting and financing the privatisation and corporatisation of municipal services and has provided advice and funding to dozens of municipalities in the country along these lines (McDonald, 2002).

Thus, they have adopted the compromise approach of 'commercialisation' or delicately termed 'restructuring' of state owned enterprises, particularly public utilities, while leaving them formally under public ownership (Keet, 2000b p17).

"Commercialisation is a process of 'creating an arm's length service entity that is formally owned and operated by the state but which is ring fenced[7]' financially and managerially from other services" (Shirley 1999, PWC 1999, PDG 2001 cited by Smith, 2002 p43). This approach is taken when the state cannot discard all responsibility by simply selling off state utilities. Commercialisation's underlying intention is 'to gradually and piecemeal, but inexorably, transfer public assets into private and foreign hands' (Keet, 2000b p16). This is often an "immediate measure to make the entity in question more efficient, profitable and attractive, prior to its sale" (Keet, 2000b p18). 'Cost recovery' and 'user fees' are introduced with the effect of reduced accessibility and utilisation of services. An additional aspect of corporatisation is the outsourcing of core and non-core services, whereby services undergo unbundling by contracting out aspects of the services to private enterprises, thus reducing the control of state utilities (Smith, 2002).

When basic needs and human rights, or development imperatives are no longer viewed as such, services are not sustained by public resources and become increasingly subjected to profitability criteria, to the pressures of vested commercial interests and to market forces (Sanders et al, 1996, cited by Keet, 2000b). Commercial criteria, when applied to public social services, are counter-productive to human resource development and capacity

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[3]As a form of internal reorganisation, corporatisation involves the financial or managerial ring fencing of public utilities (Smith, 2002). Financial ring fencing's objectives are to create a transparent form of accounting where all income and expenditures associated with service delivery, can be identified, along with subsidies in and out of the ring fenced unit. Ring fencing separates all financial and human resources directly involved in the delivery of a particular service from all other service functions. This is intended to reveal the real costs/surpluses of running a service and to allow managers to identify areas of financial loss/gain that may otherwise have been hidden in the intricate accounting systems and cross-subsidisation mechanisms of an integrated service delivery scheme with centralised accounting. Financial ring fencing also creates an opportunity to introduce financially driven performance targets and hence makes public utilities attractive to private corporations who have the expertise to ensure a positive financial bottom-line (Smith, 2002). The Director General of DWAF, Mike Muller, reiterated government's ring fencing agenda by stating that, "water services must be ring fenced by local authorities" (Muller, 2003; presentation to DWAF portfolio committee).

building, with the cumulative effect of aggravating the social and political as well as the financial burdens of government (UNDP, 1994-1996, cited by Keet, 2000b). This perception of creeping 'privatisation and commodification' of water, critics argue, negates important basic human rights, equity and justice, and undermines government responsibility and capacity to uphold provision of these rights (Overseas Development Institute, 2002). Without clearly defined procedures, full transparency and rigorous scrutiny, the restructuring of state assets in many countries, is proving, in the main, to be a self-serving process of manipulation by privatisation proponents, who are well positioned in the economy to take advantage of privatisation exercises, or strategically-placed or politically influential (Weekly Mail, 1996, cited by Keet, 2000b). The "self-serving motivations of the proponents of privatisation, as well as the effects of the whole process are extremely questionable" (Keet, 2000b p17).

Water should remain a public resource within local control. However, critical public sector reforms are needed to ensure public development goals: public sector utilities are in desperate need of restructuring, requiring public sector reform rather than take-over by private interests. "Development of well-run public water systems that serve the entire population should therefore be a priority" (Public Citizen, 2002b p2).

2.7 Government responsibility and accountability

Those proponents standing on neutral ground maintain that irrespective of the approach chosen (public or private), governments maintain a major responsibility for providing an effective and efficient regulatory framework and enabling environment within which the service providers operate and the water use rights of citizens are upheld (HRH, Prince of Orange, 2002; Water Action Unit, 2002). This legal and regulatory framework should constitute a commitment to pro-poor service delivery based on the principles of equity and sustainability; and platforms and rights should be implemented to ensure citizens engage in the political process and hold governments or local authorities accountable (HRH, Prince of Orange, 2002; Water Action Unit, 2002; Hall, date unknown). One such legal policy is the South African Municipal Systems Act, which stipulates that municipalities first assess and reorganise internal delivery mechanisms prior to the consideration of private sector delivery (cited by Weekes, 2001). However, this Act is limited by an absence of indicators that

measure if and how sufficient efforts have been implemented in the reorganising of internal delivery systems prior to the abandonment of public delivery to private delivery options.

The partnering of the private sector, government and civil society has been one recent innovation in an attempt to capture the relative strengths of each institutional form and assign roles based on these strengths. Finding role complementarily has proved elusive; however not least because of the different institutional time-horizons and motivations for participation involved in partnership processes (Caplan et al, 2001 cited by Overseas Development Institute, 2002). However, if a partnership process is initiated, the key issue is seen as a balance between private sector efficiency (including a commitment to national priorities to meet the needs of the poor) and public sector enforcement and regulation (Overseas Development Institute, 2002; DWAF, 2002). Although it is purported that the public sector option should always be constructed and considered; ultimately, the decision on whether or not to allow private sector participation rests with governments and their people who must take into account their historical and cultural backgrounds (Water Action Unit, 2002; Hall, date unknown). These decisions, if taken by informed, capacitated and well-intentioned individuals, would be the preferred option; however, as stated in section 2.6; this is seldom the case. The South African government has made limited attempts to commit themselves (budgets and political will) to public sector options thus far.

2.8 South African local government structure and regulation systems

Worldwide, approximately 95% of water delivery services are handled by municipal utilities (HRH Prince of Orange, 2002; Streeter, 2002). The South African local government has the primary constitutional responsibility to provide basic water and sanitation services to people living within its boundaries (DWAF, 2002). Local government, as stated by DWAF (2002), is an independent sphere of government and is assigned the executive authority by national government for the provision of water and sanitation services. Financial resources and municipal capacities differ with the implication that some municipalities may achieve greater access and efficiency gains. This includes setting tariffs and making bylaws. Provincial and national government have the duty to monitor, support and regulate local government as well as set national standards. However they are not permitted to take actions that may undermine local government's ability to

exercise its' executive authority. This decentralised structure relies on cooperation between the various spheres of government. Figure 2.1 conceptualises the water services regulatory framework (DWAF, 2002 p32).

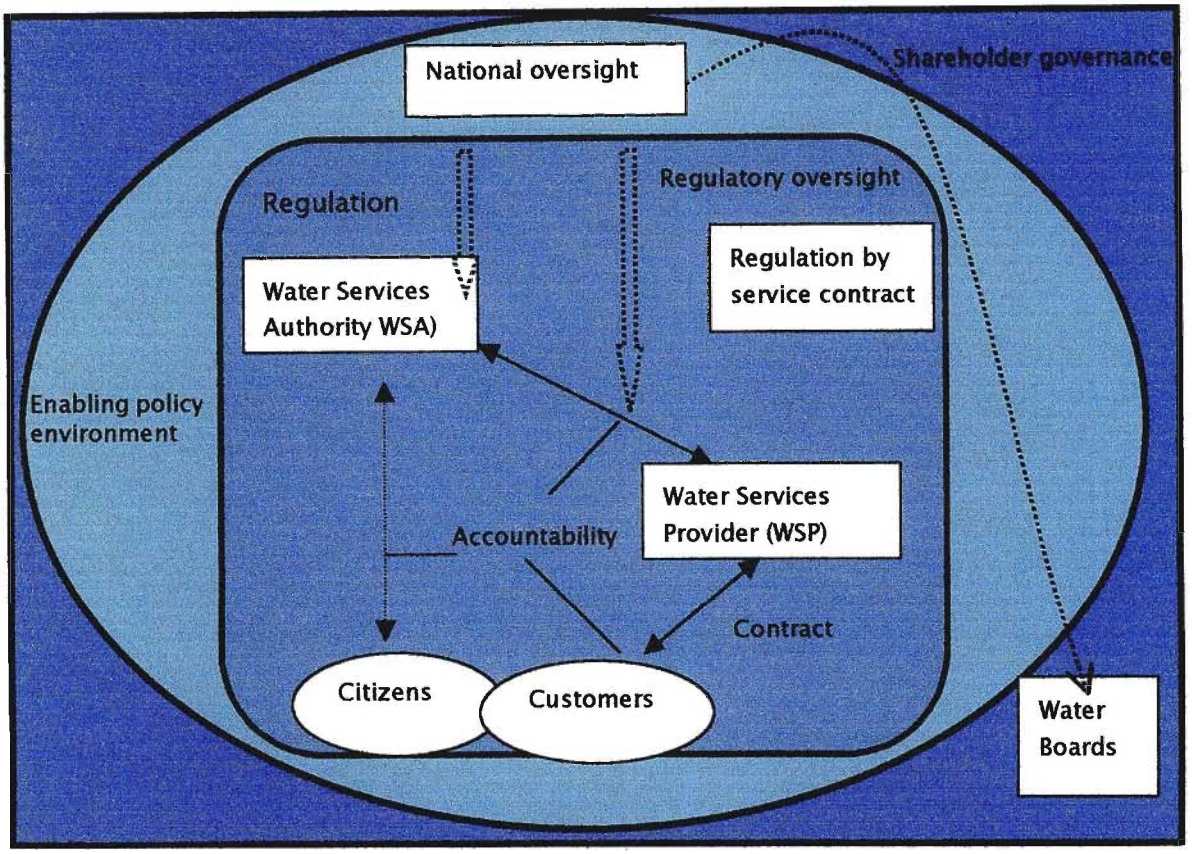


Figure 2.1: A conceptual framework for water services provision (DWAF, 2002 p32).

The decentralisation of government service provision and hence the allocation of responsibility for water services to local government, as well as the separation of the role of the water service authority from the function of water service provision, indicates that a two part regulatory system is necessary (DWAF, 2002). The first regulatory system entails that water service providers (resource and/or service providers) are regulated by water service authorities (typically through service contractual agreements). The second regulatory system requires that water service authorities (local government) are regulated by national government to ensure that the objectives of government (vision and objectives of the water services sector) are realised and that there is compliance with the relevant legislation (DWAF, 2002). "The national regulatory function has jurisdiction over the contracts set up

by water service authorities with water service providers and is able to assist in regulating and enforcing contracts, if and when necessary" (DWAF, 2002 p32).

'Customers' contract with the WSP by honouring their municipal consolidated bill payments and the 'citizens' are protected by the WSA (regulated by national government) who ensure that their rights to water are upheld. However, the line between 'customers and citizens' may be hazy in that rights may differ and be determined by payment abilities above social considerations. Although the legal framework has been set in place, to date a regulatory system to give utility to the legal framework has not been implemented comprehensively (Muller, 2003). The regulatory system framework, presented in figure 2.1, appears to be sufficient in regulating the provision of water services. However, its implementation efficiency remains to be seen in the experiences of citizens to water service provision, the mechanisms implemented to support water service delivery, the implementation of regulation and monitoring systems, the conformity of local government to national government objectives and the powers of the national government to implement punitive measures on defaulting WSAs (municipalities).

2.9 Full cost recovery

Full cost recovery is a market-based policy, which includes both financial and economic functions. The financial function is where water users pay, through charges, the full supply costs of operation (service provision, billing, disposing and wastewater treatment), maintenance and capital investment in the system (Public Citizen, 2002a; Shiva, 2002; Cosgrove and Rijisberman, 2000; Hall, date unknown). The economic function requires that water rates reflect the scarcity value (long-term marginal productivity/utility cost: the cost of supplying an additional unit of water including the social cost of externalities) and the opportunity costs (the value of water in its best use) of the resource across uses (Saleth, 2001). When full cost recovery was proposed at the 2nd World Water Forum at The Hague in March 2000, it was rejected in its simple form: the international ministerial declaration agreed only to 'move towards' pricing water to reflect costs, emphasising the need to "take account of the need for equity and the basic needs of the poor and the vulnerable" (Hall, date unknown p20). Cosgrove and Rijisberman (2000) argue that full cost pricing should be accompanied by targeted, transparent subsidies to low-income communities and

individuals. Hence, public finance should be mobilised to cover capital investments and provide social protection where users cannot afford the full costs of the necessary water and sanitation programmes, thereby ensuring equity of water access (Hall, date unknown).

Wright (2002) states that while pricing systems must reflect the principle that affordability should not be a barrier to accessing basic services, water institutions need to have reliable streams of income. The economic prioritisation by water institutions is reflected in the current financing agenda, whereby the concepts of demand-based development and user financing of services has been firmly instituted (Overseas Development Institute, 2002). The cost recovery model, consistent with international agreements on the provision of basic services, is fundamental to the South African water delivery programme (RDSN, 2002). There is now a strong move to the full-cost pricing of water services for all human uses, based on the premise that scarcity exists, therefore water must be treated as an economic good, for the full economic value of water and the cost of providing water services should be recovered from all who can afford it (HRH, Prince of Orange, 2002; Cosgrove and Rijsberman, 2000). However, the challenges arise when water service charges are extended to people who actually cannot afford the service charges. Costs of water service provision, based on economic versus social principles, ensure that social imperatives become subservient to economic principles with the implication that water access is determined by ability to pay indicators thereby compromising equity and the upholding of human rights and dignity (Overseas Development Institute, 2002; Hall, unknown date).

The main difficulty with privatising and commercialising services is that it becomes difficult for private companies to provide services to low-income households (DWAF director-general Mike Muller, cited by Bond, 2003; Smith, 2002). Low-income households are a risk to the financial bottom line, as low-income households struggle to make their payments. Furthermore, in pursuit of profit margins, private companies tend to service households who can afford the services thereby making services less affordable or accessible to poor sectors of society (Smith, 2002). Already, poverty and unemployment make it difficult for a significant proportion of households to afford services and it is generally women and children who bear the consequences of service disconnections as well

as the responsibility for the collection of alternative sources of water (Bond, 2002; Public Citizen, 2002a).

A prime example of the case against cost recovery was seen through the implementation of prepaid[4] water meters, implemented in rural KwaZulu-Natal, in mid-2000, where the government converted free communal taps to a prepaid card system with a R50 registration fee. Thousands of people were forced to restrict their use of or turn to unsafe water sources as an alternative to a water service that they were economically denied (Human Sciences Research Council [HSRC], 2002; Public Citizen, 2002a). The outcome was the largest cholera epidemic in at least a quarter of a century, with 120 000 cases of cholera and the loss of 265 lives (Hemson, cited by Pauw 2003; Hall and Bayliss, 2002; RDSN, 2002). This case is ironic as the costs of health care treatment and prompt water service delivery via tankers, cost the government millions of rands (McDonald, cited by Pauw 2003). It is important to note that prepaid meters and water cut offs are illegal in the United Kingdom where they have been seen as inconsistent with sustainable development and act as a barrier for low-income households' access to water for health and hygiene purposes (Hall, 2002).

"Ultimately, cost recovery measures could become the key stumbling block to the achievement of democracy and the realisation of the development dreams of the liberation struggle in South Africa" (HSRC, 2002 p2).

2.10 Financing water

A constraint in addressing the issues related to water is the difficulty of mobilising adequate finance to implement water service delivery and access programmes (Overseas Development Institute, 2002; Hall, date unknown). Africa's and the developing world's current level of underdevelopment means that there is limited scope for raising the necessary capital from local financial markets and institutions as well as the fact that long-

[4] Prepaid meters are a cost recovery tool used by municipalities for the service delivery of water and electricity. Municipalities receive payment for services from consumers up-front; it reduces administration costs; it removes debt liability; and local authorities no longer have to contract workers to implement cut offs (Deedat, 2002). Prepaid meters work on the premise that one purchases what one can afford; if one cannot pay for the prepaid card then one automatically self-disconnects one's household from a water supply (Deedat, 2002).

term payback periods are required Wright, 2002). Hence, the developing world has to look to international[5] support for financial assistance through private and donor financing or regional and international banks (Wright, 2002). This is verified by Wright (2002), who states that economic growth and integration in the global economy is the only way to access long term finance, and is consistent with the path taken by Africa's economic policy, the New Partnership for Africa's Development (NEPAD). The conundrum is that international support is often provided on the condition of private sector delivery and hence creates political obstacles to the achievement of social goals. Further indication of Africa's financing intentions are shown through the African position paper on water which states that, "participation by the private sector in water service provision will be supported, provided that there are adequate safeguards, specifically for the interests of the poor, and generally for the achievement of NEPAD's goals" and the 'priorities for Action in Water' which include: establishing sustainable organisations and mechanisms for improved financing and cost-recovery in water resource management, development, allocation and service delivery (cited by Wright, 2002 p22). The problem with Wright's (2002) argument, besides the obvious reliance on cost-recovery, is that the 'safe guards' he refers to, are frequently not given the priority necessary for universal access and affordability. The financing path, prioritising privatisation and cost recovery, should be challenged as developing countries should be able to choose how their water service delivery goals are to be met and should not be forced to implement private sector delivery to secure their loans thereby compromising the equitability of water access to their citizens.

The afore-mentioned paragraphs show that water allocation and pricing decisions are primarily economically and politically motivated (Water Action Unit, 2002). However, whatever the schemes and the philosophy behind the financial means chosen, funds for water provision have to come from one of the following sources: water users through water charges (including cross subsidies either through different categories of users: rich/poor,

[5] Governments currently dedicate only two percent of national budgets to water services and only six percent of Official Development Assistance is directed to water services (Global People's Forum, Water Commission Statement, 2002). Furthermore, there is a substantial gap for funding investments in water infrastructure, maintenance, training and capacity building, research and data generation and for the commitment to pro-poor water service delivery (Global People's Forum, Water Commission Statement, 2002; Bonn Recommendations for Action, 2001).

domestic/commerce/industry/agriculture; geographical or community-based finance); resident citizens through taxes and government expenses (internally generated surpluses, public investment funds, government grants or loans, municipal development funds, bank loans, bond financing); world citizens through development funds (aid agencies, international development financing from public and private sources and development banks); and capital markets (Water Action Unit, 2002; Bonn Recommendations for Action, 2001; Hall, date unknown).

The South African government's proposed financial framework for the financing of South Africa's water delivery systems is conceptualised in figure 2.2 and prioritises the following financial sources for water delivery (DWAF, 2002 p33):

- Capital investment subsidies through the consolidated **municipal infrastructure grant (MIG).** This is a conditional grant which the Department of Water Affairs and Forestry (DWAF) negotiates with the National Treasury and Department of Provincial and Local Government concerning appropriate conditionalities on the grant to ensure financial mobilisation for municipalities to support water and sanitation sector objectives.
- Operating costs subsidised by government through the local government **equitable share (ES).** The equitable share is provided for by the annually enacted Division of Revenue Act (Bond, 2003). This is an unconditional grant and it is not possible for DWAF to impose direct conditions on the use of the grant. However, it is possible for DWAF to indirectly influence the use of this grant through the regulation of the financial contract between the Water Service Authorities (WSAs) and the Water Service Providers (WSPs).
- Capacity development subsidies through a single **capacity development grant (CS).** This is a conditional grant, which DWAF will negotiate with the Department of Provincial and Local Government and National Treasury to ensure adequate resources are made available for the development of appropriate WSA capacity.
- **Tariffs**, through user-charges applied by WSAs and /or WSPs, which will be regulated in terms of the national economic regulatory framework which ensures that tariff structures are compliant with the relevant legislation and regulations and that the tariff levels provide a fair return on assets (DWAF, 2002).

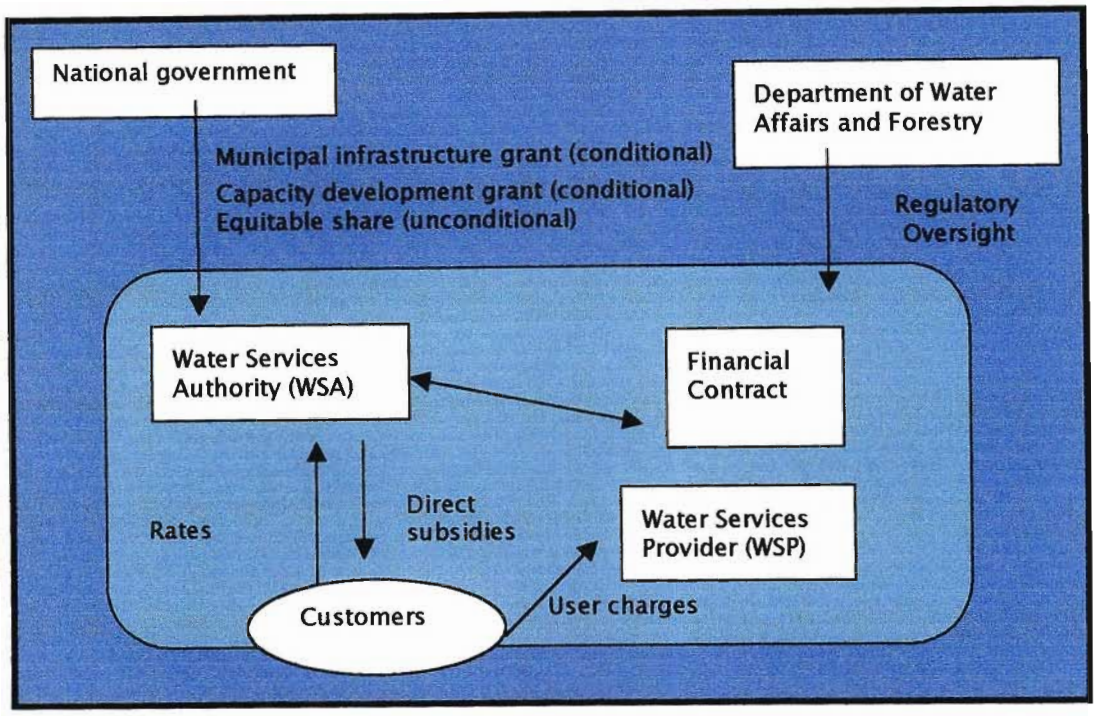


Figure 2.2: Proposed water services financial framework (DWAF, 2002 p33).

Although, as proposed by the Department of Water Affairs and Forestry (2002), numerous options of financing systems are available, intergovernmental transfers from national to local government have decreased (McDonald, 2002). Local governments are being asked to do more with less to satisfy the service delivery mandates proposed by national legislation and policy (McDonald, 2002). A critical question therefore is, is it possible for local government to assume full financial and operational responsibility for water and sanitation services, as provided by the constitution?

2.11 Water pricing

Water pricing policy is (in practice) an attempt to cater for different objectives (economic, political, social and environmental). It is therefore understandable that different groups have different priorities and motives and that these interests are frequently in conflict (Hall, date unknown). Water pricing is becoming an increasingly important aspect of water service delivery and accessibility owing to the increasing pressure by neo-liberal policies in forcing privatisation and full cost recovery on governments and municipalities. Water pricing and its twin incumbent, full cost recovery, are the first steps in ensuring the framework for private sector involvement. When water is provided with an economic value, the market forces have the potential to play a large role e.g. private corporations are

provided with a profit-motive incentive to capture public sector water utilities (Blue Planet Project, 2002). However, social-good proponents state that water pricing policies must take into account social and environmental needs; hence the twin goals of accessibility and conservation (Hall, date unknown). Water pricing policies developed along holistic frameworks by public institutions (based on the assessment of social, economic, political and environmental objectives and public considerations, consensus and a sustainable way of attaining them) are often more effective in pricing the true value of water compared with private sector companies who are often confined to simple financial objectives or bottom-line imperatives (Hall, date unknown). An example of such a holistic pricing framework is indicated by Hazelton and Kondlo (1998), who found that consumers were more likely to pay for water if pricing was equitable, service quality was adequate and reliable, and if the water service authority was accepted by the people it served. Perhaps then, low-income households' acceptability of price is the genuine indicator of targeting price accurately.

Water pricing must include the special financial constraints of low-income households. The following points must therefore be considered: (1) low-income households spend the major part of their income on service expenses to support their basic needs; (2) low-income households prioritise their access to essential services; (3) low-income households spend a larger proportion of their incomes on service access than do households that fall into higher income brackets e.g. poor people in Africa, Asia and South America often pay between 20%-50% of their incomes for water and other services in comparison with households in the developed world who pay a diminishing part of less than 1% for water (Public Citizen, 2002b). This is consistent with Pauw's (2003) findings that poor households in South Africa pay up to 40% of their incomes on water and electricity. As stated in section 1.1, a statistically representative national survey, completed in July 2001, which sampled 2520 low-income households from across South Africa, found that basic service charges typically represent a quarter to a half of total household income for 57 percent of the households surveyed (Bond, 2001). The median cost for water, electricity, sewerage and refuse removal services ranged from R224-R400 per month (Bond, 2001). These affordability constraints left little monies for other necessities, such as food, education, transport and medical expenses. Add households surviving *just* on a pension (R700 per month) or households caring for people living with HIV/AIDS to the equation and it is

recognised that South Africa faces a severe service affordability crisis (Bond, 2001). Pricing of water and essential services should not decrease the access of these basic services to low-income households. It is imperative to recognise that access to an adequate and affordable supply of safe drinking water is a basic human right and essential for survival; this should be reflected in the pricing of water so as not to compromise social goals (Public Citizen, 2002b).

2.12 Cross-subsidisation

Cross-subsidisation of the poor, by differentiating between social (domestic), economic (commerce, industry and agriculture) or regional group users and charging them accordingly, is generally regarded as a desirable redistributive, accessibility and affordability objective of water service providers (Hall, date unknown). The most common method of cross-subsidisation is through the stepped or 'rising block' tariff, (different households pay the costs of water in relation to a 'rising block' – hence each block is more expensive than the previous one). Cross-subsidisation through amicably equated rising block tariffs have the implication that the cost of water for poorer households is reduced (Hall, date unknown). The usage of the rising block tariff system is seen as a sizable reservoir for income redistribution, if the widths and prices of these blocks are carefully chosen (Organisation for Economic Co-operation and Development [OECD], 1999). This would permit everybody to obtain a minimum lifeline supply of water, with increased unit charges for higher levels of consumption as well as including the important spin off incentives to use water wisely, which is especially important in South Africa, which has limited water resources (Ralo et al, 2000).

As stated in the Draft White Paper on Water Services (2002), tariffs are the chief source of revenue for water services in South Africa (over 80% are derived from the sale of water, the remaining 20% are derived from taxes and subsidies). Tariffs are proposed to promote financial and environmental sustainability and are based on the "principles of equity, proportion to use (amount users pay should be in proportion to use of service), affordability, reflecting costs (costs associated with rendering the service), differentiation (differentiation between different categories of users, debtors, service providers, services, service standards and geographical areas) and transparency" (Draft White Paper on Water

Services, 2002 p37). DWAF, adhering to the water services act and the municipal systems act is responsible for the regulation of tariffs (Draft White Paper on Water Services, 2002). Libhaber, the World Bank's senior water and sanitation engineer in Latin America (cited by Pauw, 2003), said that water and sanitation tariffs should be socially acceptable and that they should not exceed certain payment thresholds of 3-4% of household income, otherwise people will simply be unable to pay (cited by Pauw, 2003). The World Health Organisation put the tariff figure at 7% of household income. The South African tariff structure does not meet the socially acceptable tariff rates as stated by Libhaber (3-4%), the World Health Organisation (7%) or the above Draft White Paper on Water Services' tariff principles. This is supported by the World Health Organisation, which states that "South Africans are paying too much for their water" and the countrywide study (2002) released by the Department of Provincial and Local Government (DPLG), which indicates that municipalities are 'charging unaffordable and unreasonably high service rates' (cited by Pauw, 2003 p5). Inadequately structured tariffs are causing major affordability problems and ensuring that local councils are owed millions of rand in outstanding water payments as low-income households struggle to pay the charges (Pauw, 2003).

Alternative cross-subsidisation mechanisms[6] include a tax-based approach (implemented in the United Kingdom, Canada and New Zealand) where charges are based on property values, rather than consumption hence allowing for the cross-subsidy from those with more valuable properties to those with less (Hall, date unknown). Solidarity charges are another approach, whereby affluent users (high income groups able to afford commercial rates), or those with their own connection, pay a supplement designed to cover the cost of supplying water to poorer users (Hall, date unknown). These systems could have a significant impact in South Africa, as many people are not yet connected to reticulation systems and those people already connected to such systems under apartheid, could contribute to new water connections (Hall, date unknown). Solidarity charges have received widespread support from numerous low-income groups within South Africa (Hall, date unknown).

[6] The proposed alternative cross-subsidisation options should be accompanied by sound water demand management practices with special consideration to the capacity of on-site water disposal systems, level of sanitation services and water scarcities (Pfaff, 2003).

Designing and managing such progressive and redistributive tariff systems therefore present key challenges for governments and authorities, who have to consider numerous facets in accuracy, justice and equity within subsidisation mechanisms (Hall, date unknown).

2.13 The free basic water policy

The South African government implemented the free basic water (FBW) policy in July 2001 (RDSN, 2002). To date, 26.8 million people have access to FBW[7], 12 million of which are poor people who would otherwise have been unable to afford a basic supply of potable water (Muller, 2003). The free basic water policy is a strategy initiative to ensure all South Africans (or at least those who cannot afford it) have access to a basic amount of safe water by 2004 (DWAF, 2002). The Department of Water Affairs and Forestry's Vote 34 states that 'the free basic water policy is a further step within broad municipal and intergovernmental policy towards the goal of access to basic water for all' (DWAF Vote 34, 2003). The FBW policy entitles all people to a free lifeline supply of water of 6000 litres/6 kilolitres (kl) per household per month; or 200 litres per household per day; or 25 litres per 8-member household per day (DWAF, 2002; RDSN, 2002; Ralo et al, 2000). The policy was initiated as the majority of poor South Africans could not afford to pay the full cost of water services (even if the required payment was minimal) and were therefore constrained by economic determinants in accessing the minimum requirement of water to satisfy their daily needs (DWAF, 2002; Hall, date unknown). Furthermore, the costs of water were forcing households to prioritise food over water with the implication that available monies were spent on securing food and alternative avenues were sought to secure water e.g. rivers or ground water- certain sources were not potable and led to severe health implications (DWAF, 2002). It is acknowledged that access to a minimum amount of potable water is essential for public health and environmental protection, as a kick-start to local economic development, to break the apartheid inheritance of inequality in basic service delivery and to ensure that fundamental human needs are met (Ralo et al, 2000).

[7] It is important to note that access to FBW does not necessarily mean that the 26.8 million people served are actually accessing the FBW utility (hence are using less than 6kl per month). Hence, these statistics may be misleading.

Although the FBW policy has been heralded internationally, it does have a considerable number of flaws. The first error is that the 'basic' allocation of 25 litres per 8-member household is apparently inadequate and does not meet the basic water requirements necessary for the health and well being of households (AIDC, 2002). DWAF (1994) acknowledges this by saying that 25 litres is not adequate for a full, healthy and productive life; but it can be considered a minimum (cited by Dube, 2000). Therefore, by DWAF's own assertion, the South African government is providing a minimum that does not meet health and productive life objectives. Furthermore, the derivation of the 25-litre allocation is devoid of any scientific calculations (AIDC, 2002). The Msunduzi (Pietermaritzburg) proposed interim policy implementation states the following: "consumption greater than an average of 200-litres per household per day is *assumed* to be *more* than the basic requirement' and that the 'World Health Organisation recommends that the basic water requirement is 25-litres per person per day' (Msunduzi Municipality, 2001 p61). Both the assumption and the stated WHO recommendation are incorrect. The basic water requirement as recommended by the WHO is actually 50-litres per person per day (Fiil Flynn, 2001; Ralo et al, 2000), and is consistent with the widely adopted findings of Gleick (1996). SAMWU (2002) revisited Gleick's (1996) study and put the basic water requirement at 63- litres per person per day (a 26% increase). However, AIDC (2002) indicated that even 63-litres per person per day might be insufficient as SAMWU's (2002) figures exclude the special water requirements of children, the aged and people living with HIV/AIDS[7]. The rural development services network [RDSN] (2003) found that 'the average township or urban household uses between 20-24kl per month'. This is a far greater consumption than provided by the FBW allocation of 6kl. Household size is absent from allocations and the FBW policy is based on the inaccurate assumption that low-income households use less water because of their low-income status (Smith, 2002; Fiil Flynn, 2001; Ralo et al, 2000). All of the above point to the fact that the FBW standard bears no relationship to the basic water requirements of households; and puts the whole FBW policy on shaky ground (AIDC, 2002). For the purposes of clarification, a basic allocation benchmark of +63-litres per person per day (based on the research of SAMWU, 2002; AIDC, 2002; Gleick, 1996) is debated, in this study, as an adequate per person per day allocation.

The FBW policy is dependent on sufficient resources from the public budget and is covered by local governments through national transfers and by recovering costs from those who can afford to pay (Wright, 2002). It is argued that the policy is based on a cost-recovery model instead of a subsidy from government and a tax on economic utilities, which are high volume users (RDSN, 2002). Hence, the system will only be sustainable if accompanied by cost-recovery measures and strict credit control mechanisms e.g. punitive measures for non-payment. Regarding the afore-mentioned concerns, it remains to be seen whether the South African government is considering the critical FBW challenges and taking steps to address them.

2.14 Implications of disconnection of water supply

Current poverty and unemployment levels in South Africa make it difficult for a significant proportion of households to afford basic service charges. Since 1994, millions of South Africans have had their water cut off for non-payment of service bills, with the same number having experienced an electricity cut off (Hall and Bayliss, 2002; HSRC, 2002; Bond, 2001). Added to this figure, approximately 2 million people have subsequently been evicted from their homes for non-payment of their bonds (Hall and Bayliss, 2002; HSRC, 2002; Bond, 2001). Non-payment for services results in service disconnections becoming increasingly common. Water service disconnections raise serious questions concerning water's importance to basic health, poverty alleviation, basic human rights, gender equity, education, local environments, people living with HIV/AIDS, households dependent of social grants and the dignity of all citizens. The health and safety implications of having a household's water cut off are serious, especially for women and children who bear the burden of securing alternative water sources, resulting in increased stress levels and workloads; loss of productivity (as time is reallocated); increases in domestic violence and a range of other health concerns (affecting all genders and ages) e.g. diarrhoeal diseases, including cholera and parasitic diseases (Public Citizen, 2002a; Fiil-Flynn, 2001).

Service disconnections are not responsible public health policy (Fiil-Flynn, 2001). This is because water is seen as both a basic human right as well as a general public health interest. Water and sanitation should be universally available (Hall, date unknown). As stated in section 1.1, failures to integrate universal service benefits (improved public health, better

gender equity and healthier local environments) into holistic social-benefit analyses are shortsighted and socially irresponsible (Fiil-Flynn, 2001). It is therefore a rational assertion that all households have access to a free basic supply of water, even in the event of disconnection (Ralo et al, 2000). A critical question in the disconnection debate is how credit control mechanisms can be implemented without compromising the necessity of ensuring a free basic minimum water supply? The Draft White Paper on Water Services (2002 p36) states that "if municipalities have undertaken the correct legal procedures and where provision has been made for FBW and where this right has been abused" than water may be disconnected. This challenge, however seems to be ignored by the Department of Water Affairs and Forestry (DWAF) who admit that the "national department's hands are tied regarding their influence over municipalities (Kasrils, 2002). This is a questionable position as the role of the national department is to monitor and regulate the WSA/WSP, as indicated in Figure 2.1. Perhaps, if this is DWAF's position, then the constitution and monitory mechanisms should be amended to increase the departments' powers. The implications of an amicable credit control policy and the relationship between FBW and the indigent policy could play a significant role in resolving the disconnection debate. The indigent policy is a targeted subsidy, which provides free basic services to low-income households. Msunduzi households qualify as indigents if their total monthly household income is R1378 or less per month, R16536 per annum or if the combined municipal value of land and buildings is R30000 or less (Msunduzi municipality indigents policy, 2002). Notwithstanding the above, the disconnection of water services to any consumer is a typically controversial and a highly political matter (DWAF, 2002). Cutting off the water supply of non-payers is an 'ultimate' sanction which is illegal in many countries, including the United Kingdom (Hall, 2002).

From the afore-mentioned paragraphs, it is seen that many low-income households' income simply cannot cover their basic service expenditures. It is not surprising therefore that many low-income groups maintain that failure to pay the full-costs of water should not result in a cut off of water supply. They therefore see that disconnection is not an acceptable form of credit control. This has resulted in the formation of numerous social movements, in South Africa and globally, mobilising against cut offs, arguing that access to services is a constitutional right and cutting off essential services ignores the economic

constraints of low-income households (consistent with McDonald, who said, 'we are starting to see a ground swell of opposition' cited by Pauw, 2003 p4). The Soweto Electricity Crisis Committee responded to electricity disconnections by launching Operation Khanyisa. This involved committee activists illegally reconnecting those who had been cut off for non-payment. Community groups, specifically the 'Anti Eviction Campaign,' have undertaken a similar campaign in reaction to water cut offs in the Cape Flats, Cape Town. An interesting point to note here is that service disconnections did not take place during apartheid for fear of widespread revolt (Petersen, 2002).

2.15 Alternatives to the dominant privatisation paradigm

Governments, unions and civil society organisations are faced with numerous challenges in responding to the neo-liberal paradigm of the privatisation of water resources and water services. Financial, monetary and broader economic and socio-economic policies are rapidly being constrained within an inflexible set of pre-determined macro-economic policies and imbalances (Keet, 2000a). Ultimately, the key issue is whether to accept such financial policies as immutable 'realities' within which to operate, or whether to interrogate the economic assumptions underpinning such inflexible policies as the determining framework for all economic and social development policies (Keet, 2000a). There are numerous options and possibilities for policy manoeuvres at the international and local level and decision makers do still have the political and economic space to retain, improve and extend public services (McDonald, 2002). A good starting point, internationally, would be to advocate for human rights and environmental protections to be beyond the reach of the WTO (Blue Planet Project, 2002). Water and water services should be kept out of the WTO and the General Agreement on Trade in Services (Global People's Forum, Water Commission Statement, 2002). Furthermore, a new international agreement on water that recognises water as part of the global commons and not the global market place should be ratified and implemented (Blue Planet Project, 2002). On a local level, groups can put pressure on governments to increase intergovernmental transfers from national to local government (hence, mobilising national resources to be used for local water access). Furthermore, public resources (redistribution of human, financial and capital resources per capita) should be more equitably distributed to remedy historic and social injustices and cross-subsidisation should be strategically applied (McDonald, 2002). Pro-public

proponents suggest that moratoriums on privatisation (and commercialisation) should be instituted (locally, within municipal jurisdictions, nationally and internationally) at least until better information on public resources and capacities have been gathered (McDonald, 2002). A moratorium would prevent the premature sale and ring fencing of services that have the potential to become more efficient and equitable public sector entities (McDonald, 2002).

An intrinsic question on the response to privatisation is whether all stakeholders have the political will and capacity to engage in fundamental policy debates on the rationale for public service provision under the socio-economic conditions prevailing in their countries and regions as a whole, and to analyse the effects and efficacy of privatisation programmes, and to investigate alternatives (via pilot sites and case studies), rather than the transfer of public assets and services into private hands (Keet, 2000a). Consideration of the future role, reform and restructuring of the public sector has to be a process that engages a wide range of stakeholders, within and outside the sector, and must also be premised upon the explicit recognition that there is a range of alternatives to radical privatisation programmes that will make public enterprises and entities as effective as required (Keet, 2000a). Platforms must be created for such debates, strategies and processes. The alternatives require maintaining, revitalising and democratising state enterprises, particularly those identified as having strategic importance for national security and social as well as economic development (Keet, 2000a). Political will is also needed to pursue creative research and analysis, which is generally lacking from government planning (Keet, 2000a). Furthermore, people should mobilise to increase pressure on their governments and to create international solidarity to advance public water control (Global People's Forum, Water Commission Statement, 2002).

Perhaps one of the most disconcerting issues regarding the current global paradigm is that insufficient efforts have been made by governments to explore alternatives (Bond, cited by Pauw, 2003). South Africans should therefore explore alternative options (internally and externally). One of the best examples of alternatives to the dominant privatisation paradigm is that of participatory democracy in Porto Alegre, Brazil, which was initiated in 1989 (Menegat, 2002). The Porto Alegre's local government has been coined 'popular

administration,' which is managed according to the following key characteristics: the adoption of techniques for a popular democracy; a high level of citizen involvement in allocating the local government budget; the reorientation of public priorities by citizens; the integration of public environmental management policies, and the regeneration of public spaces (Menegat, 2002 p8). Since 1996, Porto Alegre has had the highest standards of living of all Brazilian metropolitan areas and this success is attributed to a high level of public accountability owing to an autonomous form of public participation and control (Menegat, 2002). As an example, the Porto Alegre case provides indications of what can be achieved if the public gains control of the finance, administration and public service delivery of municipal services as well as providing hope for the transformation of public sectors towards an improved social involvement versus an estranged private sector institution.

2.16 Water demand management and water conservation

Water demand management and water conservation should aim to reduce water usage and water wastage by fixed targets over fixed timeframes (McDaid, 2003). System maintenance and repair could be a management approach and is indicated in the Draft White Paper on Water Services (2002, p46) which states that 'water service authorities should consider providing assistance for the repair of plumbing fittings as it is a cost-effective intervention in reducing water service costs to both consumers and the water service provider.' It further states that water service providers should adopt a systematic approach to reduce water leakages, while considering costs and benefits through pressure management, utilising technical innovation, and developing management information systems to provide relevant and timely information (Draft White Paper on Water Services, 2002). It is important to apply the benefits of lateral thinking to the operation and management of water delivery systems; hence, cost-benefit approaches should be prioritised and not constrained by limited operational budgets and financial constraints (Shepherd, 2001). Furthermore, Shepherd (2001) asserts that the water service provider should ensure that its operation is proactive rather than reactive as such an approach provides for a sustainable water service.

2.17 Summary

The literature perused shows that South Africa's water service delivery policies and strategies are governed and confined by increasingly inflexible political and economic boundaries. Furthermore, it reflects the urgency that is required to wrestle the public sector back to a popular democracy. Water is a basic human right. However, privatisation and neo-liberalism are forcing it into the economic realm where profits can be made and social and environment considerations thwarted. Social justice, no longer applied to the life resource of water, compromises the equity, accessibility, affordability, efficiency, effectiveness and sustainability of South Africa's water service delivery policies and strategies.

In chapter three, the methodology used in the study will be systematically presented to expound on the research design; elements of community action research; conceptual framework; selection of communities, community researchers and households; data collection; survey themes; survey materials and approaches; control of the study and data treatment and analysis.

CHAPTER 3
METHODOLOGY

A community action research design was employed to determine whether South Africa's water service delivery policies and strategies were equitable, accessible, affordable, efficient, effective and sustainable to Msunduzi low-income households. Community researchers engaged directly with the research process to promote community control and direct advocacies for reform based on the study outcomes. The study methodology will report on the research design, elements of community action research, conceptual framework, selection of communities, community researchers and households, data collection, survey themes, survey materials and approaches, control in the study and data treatment and analysis.

3.1 Research design

A community action research design was applied in the study. The design was founded on community-managed research to direct and determine community-based interventions or actions to change the prevailing norm. Community action research incorporates the elements of community elicited research, empowerment, mobilisation and action (De Vos, 2000). The conceptual framework for the study is used to identify all actions, processes and data collection techniques at each research phase and to link these to the study sub problems.

The research design was adapted from the action research and participatory action research design (Terre Blanche and Durrheim, 2002; De Vos, 2000). It will henceforth be referred to as a 'community action research (CAR)' design (see figure 3.1). The design was chosen because of the realisation that community individuals are in the best position to undertake their own research on pertinent issues; they have the most to gain from such research and are best able to provide the commitment and determination necessary to take resulting findings forward. The CAR design is comparable with Gill and Johnson's (1991) definition, cited by Hart and Bond (1995), as a design involving a planned exploration by a researcher into an everyday event (in the case of this study, it is preferable to adjust the 'everyday event' to a 'life- situation'). Lathlean (1994) cited by Hart and Bond (1995 p53) states that action research is distinguished by the features of "taking action in the real world and a close examination of the effects of the action

taken, thus it always involves intervention." CAR involves action; hence, the research is undertaken with the objective of bringing about an action to change the socio-economic and socio-political norms. Structures are created for the community action research to be transformed into usable action strategies (refer to figure 3.2). These structures will be expanded upon in the following section. CAR, as used in this study, is built on the following foundations: community elicited research, empowerment, mobilisation and action (expanded upon in section 3.1.1). The model of the CAR process (as used in this study and adapted from the participatory action research model as indicated by Rahman, 1993 cited by De Vos, 2000) is presented in figure 3.1.

3.1.1 Elements of Community Action Research

The aim of the action research design is to bring about a social change in the participants (supported by De Vos, 2000). Community members, who would usually be seen as the subjects of research, are seen as capable of co-creating their own reality. Data are collected in cooperation with identified research participants (referred to, in this study, as 'community researchers' [CRs]) who are empowered by the researcher to undertake their own research (De Vos, 2000). The purpose of using such a type of design is supported by Rahman (1993) cited by De Vos (2000 p18) who "states that people want to stand up, take control over what they need to work with, do things themselves in their own search for life and move forward, supporting one another." Such an approach is pertinent owing to the current water situation whereby water activists require hard-core data to support their advocacies for the reform of policies. If a researcher approached this type of data collection through the conventional approach of monopolising ownership and control of the process of research, he/she would not only limit the participants' ability to understand the prevailing systems and seek community solutions, but would also deny the participants the opportunity to take the issues forward through mass advocacy for an improved life-situation (Terre Blanche and Durrheim, 2002). Community Action Research (CAR) is an approach whereby identified community members themselves become researchers and can draw on their own collected data to facilitate community understanding, engagement, mobilisation and collective strategies to challenge the prevailing norm (consistent with Terre Blanche and Durrheim, 2002).

Process of Community Action Research	
Type of action	**Processes of action**
Community and community researcher identification	Communities, community liaison individuals and community researchers identified. The processes for future research, water issues, prevailing communication structures were discussed.
Workshop on research processes	Community researchers provided with research-related information to ensure that decisive choices and options were considered. Objectives for research were stated.
Research systematically discussed	Methodologies were chosen and implemented and tools synthesised for use. Respondents were identified, pilot study conducted, adaptations made and time frames implemented for research. Researcher facilitated organisation of community researchers and obtained a commitment by all to become research partners. Monitoring and control mechanisms were discussed and implemented.
Data-gathering phase and analysis	Surveys were conducted within given timeframe. Community researchers were involved in a two-day workshop to critically reflect research findings, fill in gaps, build consensus, capacity and validity. Community researchers were assisted to document their findings, articulate experiences and evaluate process.
After analysis	Action strategies on extending and disseminating findings were discussed and implemented. Findings of research were disseminated through a 'door-to-door information campaign' and local newspaper supplements to conscientise communities. Municipal departments and NGOs were engaged to triangulate data.
Work shops	Researcher and community researchers facilitated community workshops; conducted to provide information, promote community buy-in and solidarity. Community task teams (included community researchers and interested community members) were formed and a community action plan was initiated to support reforms. Researcher and community researchers created community platforms for community issues through existing structures or through those created in figure 3.2.
Action plan evaluation	Action plan was evaluated, adapted and synthesised for a joint approach with researcher, community researchers, community task teams and wider community. Community task teams reviewed progress collectively and formulated future course of action.
Researcher role supportive and eventually phased out.	Researcher's role was changed to a supportive role. Communities initiated advocacy strategies in the support of reforms through the Water Action Campaign (see figure 3.2). Researcher role eventually phased out.

Figure 3.1: Model of Community Action Research process (adapted from the participatory action research model: Rahman, 1993 as cited by De Vos, 2000 p416).

Incorporating the chief characteristics of Participatory Action Research (PAR), as identified by De Vos (2000), CAR uses alternative systems of knowledge, which are based on the community researchers' involvement in decisions regarding the questions to be asked, who the respondents will be, how the questions will be asked, what role the researchers will play in data gathering, how the data will be interpreted, the development of models and programmes, and the evaluation of all processes. Hence, the actual research is subservient to the emergent processes of collaboration, mobilisation, empowerment, self-realisation and the establishment of community solidarity (De Vos, 2000).

The action research design is an empowering type of intervention and includes building alliances and networks, improving communication systems and reframing issues (Terre Blanche and Durrheim, 2002; Hart and Bond, 1995). As defined by De Vos (2000), empowerment is a process of increasing personal, inter-personal and political power, enabling individuals to act in cooperation to improve their life-situation. Mobilisation is a direct result of empowerment and refers to the engagement by large masses of people in a collective action (comparable with De Vos 2000). Mobilisation takes into account the nature of the problem and the availability and structural features (density, size and nature of support networks), which determine the character of the mobilisation. Social support structures were initiated by research participants where they were absent, used where they already existed and built on where existing structures were weak (by building networks and support mechanisms, consistent with De Vos, 2000). Two different structures, operating at different levels, were created during the study: the Water Action Campaign and community task teams. The Water Action Campaign provided a platform for engagement on fundamental water issues and policy debate, information sharing and water-related advocacies. Community task teams, based in each participating community, were used to facilitate a local platform for the discussion of pertinent issues (refer to figure 3.2). The structures were implemented to ensure that debates and actions resulting from the analyses of the data were adequately housed and supported through information sharing, capacity building and group cohesion. The structures, although proposed and initiated by the researcher, were accepted and supported by the community researchers.

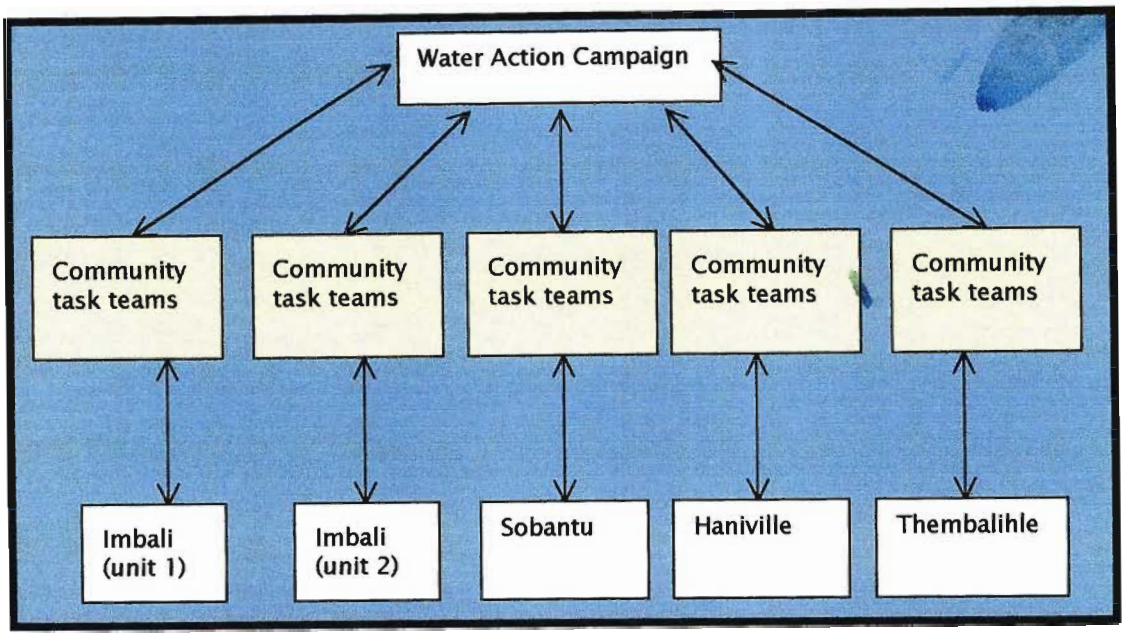


Figure 3.2: Engagement and advocacy structures.

The last and fundamental element of community action research is that of community managed and directed action. The actions were founded on community-elicited data, community decision-making and planning. Communities determined and identified the strategies necessary to advocate for reforms and implemented these strategies supported by broad community mobilisation (community action was still pending and therefore was not documented in this paper).

3.1.2 Conceptual framework for the study

The conceptual framework for the study is presented to identify elements and themes involved in the research (refer to figure 3.3). Four tiers of water service delivery are depicted: the global water service delivery paradigm (neo-liberalism, international finance institutions, transnational corporations, cost recovery and privatisation); national water service delivery (neo-liberalism, cost recovery, privatisation, national policies, citizen rights, financial mechanisms and regulation); municipal implementation strategies (implementation of policies, setting of tariffs, cross-subsidisation, credit control mechanisms, municipal efficiencies, effectiveness and administration systems); and community experience to water service delivery (socio-economic status, payment abilities and specific household requirements.

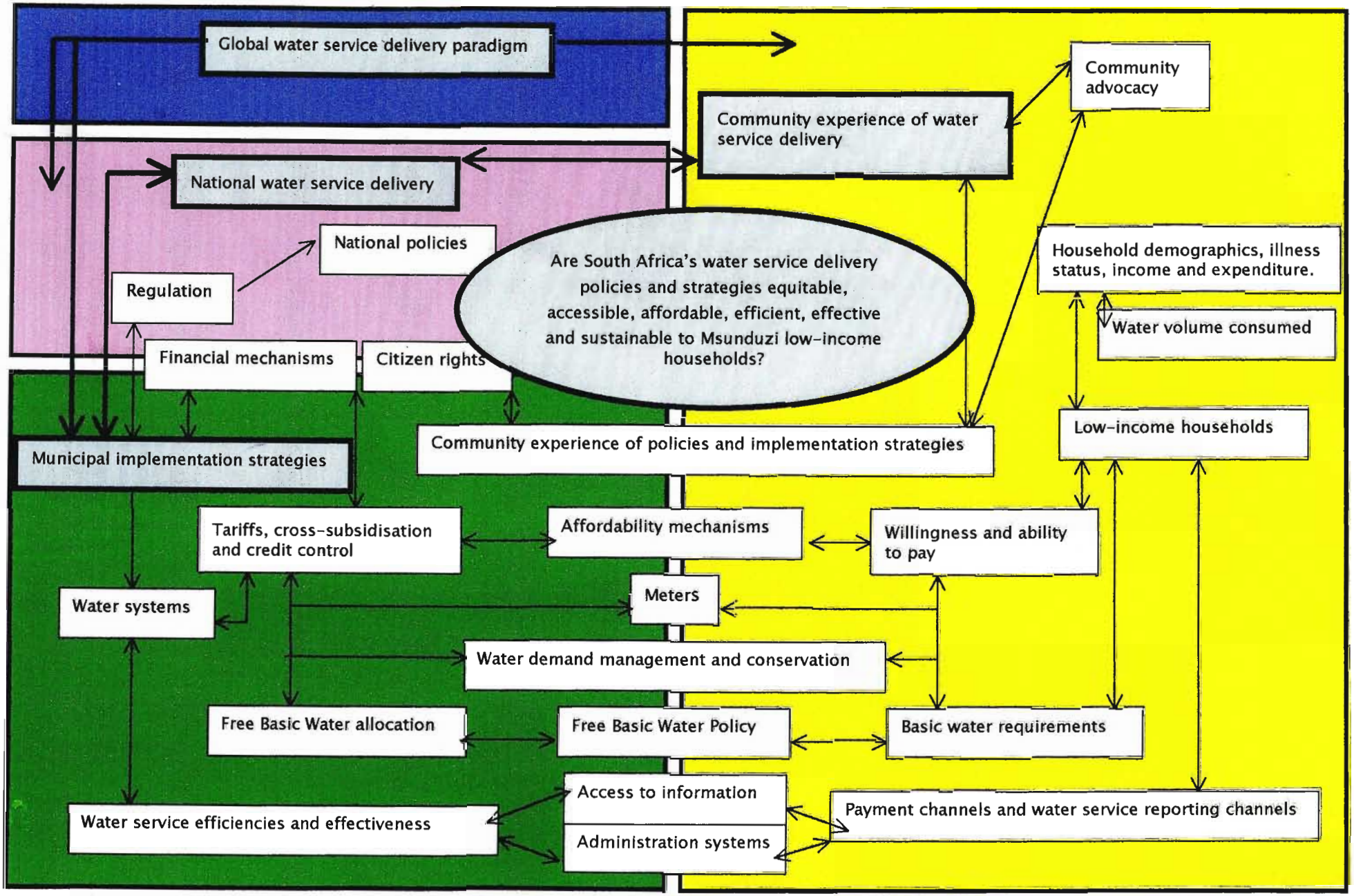


Figure 3.3: Conceptual Framework for the study.

All four tiers of water service delivery impact on one another; however, the degree of influence differs e.g. the Msunduzi municipality has a Free Basic Water (FBW) policy however, its success is influenced by the basic water requirements and consumption patterns of low-income households as well as the information available to households and their use of monitoring tools such as meters. Furthermore, if the FBW policy does not meet the basic water requirements of households, than the willingness and ability of households to pay any excess consumed, over the first 6kl, would influence both the household's income status and their ability to access a basic supply of water to secure their livelihoods. The research concentrates primarily on the experience of communities to municipal water service delivery strategies, which are governed by South African national policy and strategy, which in turn are limited and confined within the rules and norms of the global paradigm.

3.2 Selection of communities, community researchers and households

Non-probability sampling was used in the study, both purposive and snowball, and consistent with the manner described by De Vos (2000). Four tiers of sampling were used at different stages within the research process: community, initial contact person, community researchers and household selection. Purposive sampling was used in the selection of communities and community researchers, and occurred over a period of two months. The researcher familiarised herself with the water-related issues affecting the Msunduzi jurisdiction through attending numerous water workshops and networking with potentially interested organisations and individuals. Affected communities were identified through these workshops, networks and various local news materials. The communities were purposively selected on the criterion that they were experiencing certain water-related problems, relevant to the study. Community contact individuals living in these communities were purposively selected, by the researcher through one-on-one interviews, according to the criteria of gender mainstreaming, interest, commitment and involvement in development committees. These community contact individuals were liased with and the research proposal was discussed.

After interest was shown, the community contact individuals were tasked to identify four individuals each from their communities, who would be involved in the community research. These individuals were purposively selected, by the community contact individuals, according to the same criteria as above. Systematically, five community

researchers (ordinary community members, including the contact person) were chosen to conduct community research in each of the following peri-urban communities: Imbali (units 1 and 2); Sobantu; Haniville and Thembalihle. Twenty-five community researchers were involved in the study (5 representing each of the 5 study areas).

The households to be interviewed were selected on the criteria of known water payment difficulties and general water service-delivery dissatisfaction. Hence, absolute randomisation may have been compromised for the collection of truthful and relevant data. Both purposive and snowball sampling was utilised in the selection of households owing to the controversiality and sensitivity of such research and the nature of the data collected. Additional data collection techniques (focus groups, workshops and house-to-house information dissemination) targeted community members who responded to information leaflets (refer to appendix F) and local information published through free local newspapers (refer to appendix G). This allowed for an inclusion of households not directly involved in the surveys. The pilot study was conducted in Imbali (unit 1), as it was decided by the community researchers that this area provided a comparable situation of all areas to be covered.

3.3 Data collection

Data was collected using a variety of methods: surveys and focus groups; community meetings, regional and national meetings and water-related workshops; community visitations; local and national policy analyses; and involvement and informal engagement with various municipal departments, non-governmental organisations, organisational programmes and workshops.

The community researchers involved in the study, participated in a two-day 'Community Action Research workshop' facilitated by the researcher. The first day was valuable in providing a framework for the introduction of CAR as well as a discussion of the prevailing water issues in Msunduzi (which became the themes of the research). It provided a platform in which generic action research skills were taught – applicable to any issue that the community researchers might face in the future. The second day was used to translate the theory (of the previous day's work shop) into the practical application of the research skills (in this case, the identified water-related themes), culminating in the selection of methodology and data collection techniques to

be used in the study. The community researchers were involved in every phase of the research process: methodology, synthesis and collating the questions used, data collection, analyses of the results and strategies to take the findings forward (consistent with Terre Blanche and Durrheim, 2002). A detailed report of the workshop elements is included in Appendix A.

The researcher attended numerous community meetings, regional and national meetings and water-related workshops to engage in debate, present the picture of the Msunduzi water situation and strategise community formulated plans of action. The researcher attended two community meetings in each of the selected communities, and were initiated as a direct result of the research: Imbali (units 1 and 2); Sobantu; Haniville and Thembalihle. The researcher attended eight regional and six national meetings for a comprehensive understanding of the dynamics and diversities involved in water service delivery. These included the following: South African Civil Society Water Caucus, Cape Town Water Caucus, Parliamentary Civil Society-DWAF portfolio committee meetings, World Summit on Sustainable Development and the Sustainable Water Forum (Cape Town). Numerous water-related national and local workshops were also attended to familiarise the researcher with a comprehensive South African and global picture of water issues (see Appendix B).

Community visits provided observations of the Msunduzi, KwaZulu-Natal and the South African water-situation. This provided the study with substance and contributed to a comprehensive understanding of the situation. The areas, in which the surveys were conducted, were visited, as were the following areas, Woodlands (unit 11) and Copesville (unit 29) in Msunduzi, Umlazi (unit J) in Durban, Gugulethu, Khayelitsha and Tafelsig in Mitchell's Plain, Cape Town. These visits provided informal engagement with community members; opportunity to ask questions (informally) and permitted the opportunity for powerful observation.

Local and national policies were analysed to provide a framework in which the local water-related issues were housed and governed. The following policies were reviewed and analysed: Towards a Water Services White Paper (DWAF, 2002); Draft White Paper on Water Services (2002); Indigent Policy (2002); National Water Resource Strategy, proposed first edition (2002) and the Free Basic Water Policy (2001).

Municipal departments and non-governmental organisations were interviewed informally to obtain and triangulate information and acquire valuable insight into the official water service delivery paradigm.

The researcher participated in, and provides organisational support to the Anti Eviction Campaign (AEC). The AEC is an advocacy group for households facing eviction proceedings owing to non-payment for services and loan repayment defaults. This alliance assisted in the identification of communication channels, data collection techniques and advocacy methodologies. Furthermore, it assisted the researcher in informal engagement and debate on pertinent water-related issues to provide a foundation of understanding on the prevailing national water service delivery situation.

3.3.1 Data collection techniques and approaches

The survey materials and approaches were related to the data collection techniques used in the study. The diverse array of survey materials and approaches adopted reflected the necessity of engaging effectively at different levels. Data collection techniques included surveys and focus groups, community meetings, local and national meetings and water-related workshops, community visitations, local and national policy analyses, and involvement and informal engagement with various municipal departments, non-governmental organisations and workshops.

Surveys were supported with focus groups (with community researchers and community members) to ensure comprehensive understanding as well as to fill in gaps in the survey. Focus groups were also effective for facilitating a greater representative of the survey: 2 workshops were held in each area (approximately 30 community members attending each workshop); house-to-house information campaign (each community researcher interviewing 10-15 households); and research team community visitations (informal interviews with community members in different municipal areas). All data collection activities were represented by both genders equally. The outcomes of the diverse data collection techniques were representative and accurate of the communities in the study area.

Surveys were chosen because of their ease of utility, value in providing entry into communities, as well as the ability in collecting large quantities of data (Woodhill and

Robbins, 1999). Closed and open-ended questions were included in the surveys to ensure that responses were qualified. The community researchers were coached to ask questions beyond those stated in the survey to ensure that their own individual capacities were expanded. Due to the sensitive nature of certain questions, time was spent putting the interviewees at ease through building rapport. In the interests of greater community involvement, some accuracy in data collected had, of necessity, to be yielded.

Focus groups were used for two purposes: to expand the study outcomes and to build group cohesion, as the research design chosen went beyond the boundaries of mere data collection to include action (Woodhill and Robbins, 1999). Consensus building and participation were aimed for in all activities and all workshops carried this component. Brainstorming activities, individual (round-the-group) inputs, research group inputs, group reporting, minute taking, report-backs, summaries and in-workshop documentation were part of activities introduced to promote organisational capacity building amongst the community researchers. The primary materials used were flipcharts, which were easy to follow, and promoted interaction. Activities were participant-friendly and efforts were made to ensure ease of learning and engagement. Workshop proceedings were made available to the community researchers and provided a valuable reference point. Action planning time frames for research process activities, persons responsible for each activity and deadlines were drawn up by the researcher and community researchers (Woodhill and Robbins, 1999). This ensured that the researcher and community researchers were aware of future commitments, engagements and promoted the ownership of the research process by all involved.

Community meetings/workshops were arranged to understand community dynamics and community channels (to take issues forward). Community meetings/workshops (2 per area) provided a platform to obtain wider community consensus and representivity of the study findings. The meetings/workshops were open to all community members and the issues raised were consistent with the study findings. The meetings/workshops also provided opportunities to engage in debates on water-related issues and to build capacity within communities. Due to the substantial interest in the study, these engagements also provided the researcher and community researchers with opportunities to explain the importance of the study to the wider community as well.

These engagements were also valuable in building wider community support for the study outcomes and a commitment to forward water service delivery reforms.

National, regional and local water-related workshops (policy hearings, discussions and water service delivery issues)[1] were used by the researcher and community researchers to network and build on their knowledge foundations. The researcher and one representative of each community research team conducted community visits to build a comprehensive understanding of the areas in which the research was conducted as well as gaining wider understanding of areas not directly involved in the study. These visits provided valuable insight for the researcher, and also promoted group cohesion amongst the community researchers.

Local and national policy analyses were conducted to understand the water service delivery paradigm. These were valuable in identifying policy and water service delivery inconsistencies. The researcher conducted the policy analyses. However, efforts were made to triangulate analyses with water-networks and discuss the policy implications with community researchers. Efforts were made to access municipal statistics. However, attempts were fruitless and, at best, the researcher could only access municipal 'unofficial' comments on specific study results (comments are clearly indicated in the study results). Informal engagement with various municipal departments and non-governmental organisations were used to triangulate data and to access information.

3.4 Survey themes

Community researchers, participating in the two-day, 'Community Action Research workshop,' were asked to discuss and present the chief water problems experienced in their communities (refer to section 3.3 and appendix A). These issues were divided into specific themes and represented in the surveys to ensure clarity and relevant data on specific variables (consistent with Terre Blanche and Durrheim, 2002). The surveys encompassed the following themes: household demographics, water systems,

[1] Financial restrictions allowed only the researcher to attend national meetings. Regional meetings were attended by the researcher and one community researcher representing each area. However, the meeting procedures were discussed with all community researchers. Local water-related workshops (organised through the research process) were attended by the researcher and all community researchers. Workshops involved presentations, engagement in debate, building capacity and understanding on relevant policies and strategies.

affordability mechanisms, administration systems, water service efficiencies and effectiveness.

Household demographics were used to conceptualise a picture of low-income households. It also provided for an easy introduction to the survey and assisted in building rapport between the community researchers and the households. Items included general demographic questions, such as: home ownership, employment, other income and illness status characteristics (refer to chapter 4: sample characteristics). Water system delivery themes included types of water system connections, quantities used per weekday and weekend, adequacy and affordability. Tools in service delivery and monitoring questions were used to ascertain the acceptability and efficiencies of water meters and the implementation and information available on Free Basic Water. Affordability mechanisms, including household expenses and income themes, were used to elicit household economic considerations of various service expenses in relation to household incomes. These questions were valuable in assessing affordability capabilities and constraints. Administration system themes were directly related to water service payments and contributed to the holistic picture of the water service delivery framework. Water standards and quality themes elicited data that contributed to the understanding of water service satisfaction and the willingness to pay. Water service efficiency themes were a culmination of all questions and hence provided an explanation of satisfaction or dissatisfaction with the service provider as well as suggestions for municipal service improvement. Appendices C and D provide the survey sheets and translations and should be read in conjunction with the above-mentioned theme explanations.

3.5 Control of the study

Controls and monitoring mechanisms were implemented at each stage of the research process. These were implemented through actively building capacity within the community researchers. Participation and consensus building were at the core of the research design, which had the effect of a 'double-control', because activities were automatically verified for relevance and validity.

All community researchers participated in an initial two-day CAR workshop (refer to section 3.3). This compulsory participation ensured that the community researchers

were familiar with the research process. Consequently, only the community researchers who attended the full workshop proceedings were involved in conducting the surveys to ensure that surveys reached a satisfactory standard. Translation, synthesis and collation of surveys were conducted with input from five community researchers (each representing one study area). A pilot study was subsequently conducted in Imbali (unit 1) to ensure that surveys were relevant and easy to understand. Adaptations were made to the original survey and the adapted survey was presented to the research team leaders and discussed for additional input and clarification. The research team leaders then discussed the survey with their teams. Surveys were conducted within a two-week period (between 22 October and 05 November, 2002). The period ensured for minimal seasonal variation.

Data analysis was conducted in a focus group, with all community researchers, to ensure that the statistical analyses were comparable with the general joint-analysis. This control ensured internal validity of the results as well as providing a valuable monitoring mechanism, understanding and consensus of results. The researcher was involved in all activities, except actively conducting the surveys, and provided guidance at each stage. This ensured that a standard control was implemented throughout the research process. Activity evaluations of all processes were implemented, ensuring that researchers were constantly analysing their performance and learning abilities.

3.6 Data treatment and analysis

Data treatment and analysis was conducted in two forms: the first form was through a focus-group, comprised of all community researchers, which employed a participant-friendly approach where the analysis was conducted by reconstructing themes to build an in-depth picture of local water service delivery paradigms (consistent with De Vos, 2000); the second form was a statistical analysis by the researcher of the data using the SPSS programme.

Community researchers attended a post-study two-day workshop at which an explanation of data treatment and analysis was presented. The analysis was conducted through building consensus on each water-related theme. Each theme was approached to build a picture of the particular theme employing the rich picturing technique (Woodhill and Robbins, 1999). After the themes were discussed (household

demographics, water systems, affordability mechanisms, administration systems, water service efficiencies and effectiveness) the findings were summarised to build a full picture of the prevailing water situation. This joint analysis was used to support the statistical analysis of the results.

The researcher, using the SPSS programme, conducted a statistical analysis of the data. Data treatment occurred by dividing the survey into themes or issues. All questions were coded to provide for statistical treatment (refer to appendix E). The SPSS programme was used to analyse the data, and primarily employed frequencies, correlations and Pearson's Chi-square tests to elicit variable links. Qualitative data and observations were utilised to support the statistical results.

3.7 Summary

The methodology of the study was discussed by detailing the Community Action Research process. The following aspects were discussed for this purpose: research design, conceptual framework, selection of communities, community researchers and households, data collection, data collection tools and approaches, survey themes, control of the study and data treatment and analysis. Chapter four will present the sample characteristics for the study.

CHAPTER 4
SAMPLE CHARACTERISTICS

The characteristics of the sample provide the foundation for the experiences of low-income households to national and local water policies and strategies. The sample characteristics are intentionally brief and provide an introduction to the household demographics and the socio-economic status of low-income households and the community water service delivery situation, which will be expounded on in chapters 5 and 6. Characteristics of the community researchers and external stakeholders are stated to ensure clarity on positions or perspectives voiced.

4.1 Sample characteristics

The sample of low-income households came from the Msunduzi municipality within the uMgungundlovu District Municipality (DC22); with five areas sampled: Imbali (unit 1), Imbali (unit 2), Sobantu, Haniville and Thembalihle (refer to figure 4.1: map of study areas). The sampled areas provide the location for the study. Community amenities are given to provide an indication of the physical resources available to the sampled communities. Household demographics and socio-economic status are given as a foundation for the experiences of low-income households to national and local water policy and strategies. Community water service delivery provides a picture of how households access water.

The sample characteristics are based on the information and experiences sourced from 314 households via community researchers in the 5 study areas. Twenty-five community researchers were tasked to conduct fifteen surveys in each of their respective areas, providing 375 surveys. However, certain surveys had to be discarded because of substantial missing data. The number of households surveyed in each area is depicted in table 4.1.

Table 4.1: Number of households surveyed per area.

Area	Households surveyed per area (n=314)	Sampling percentage in sample
Imbali 1	53	16.9
Imbali 2	38	12.1
Haniville	88	28.0
Sobantu	75	23.9
Thembalihle	60	19.1
Total	314	100.0

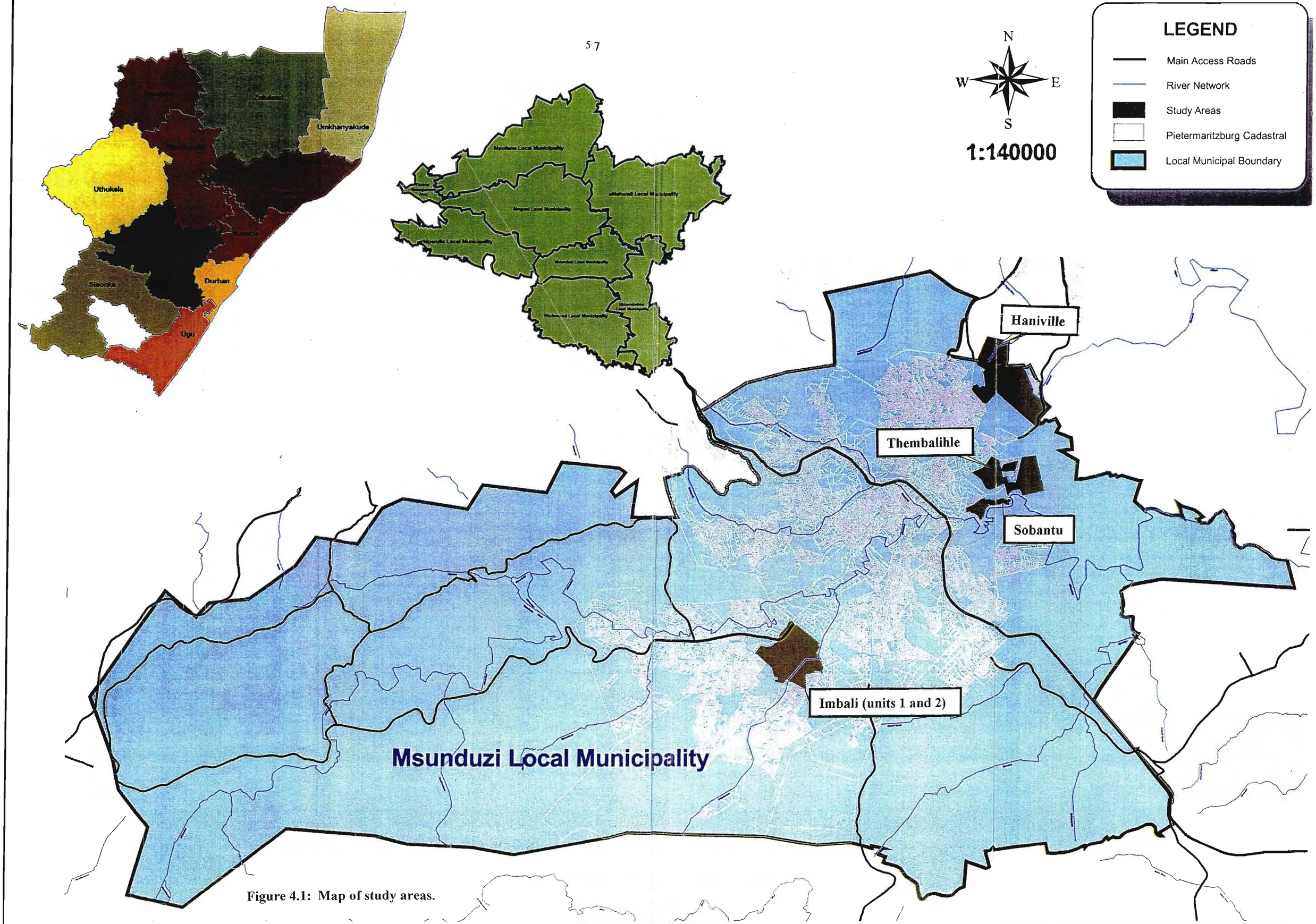


Figure 4.1: Map of study areas.

4.1.1 Characteristics of community amenities

The areas in the study had the following physical resources (however, the degrees of accessibility and effectiveness varied): roads, transport, clinics, schools and spaza shops. All households, included in the study, resided in formal urban settlements. No informal settlements where included in the study. Dwelling types were generally of limited size with building materials of concrete blocks and corrugated iron roofing materials and housing extensions of concrete blocks, wattle and daub and shack material of corrugated iron, wooden planks, cardboard sheets and plastic. Approximately a quarter to a half of all houses (exact number unknown) had backyard shack residents (extended families and/or paying residents).

Households accessed the following services: piped water, electricity (billed monthly or prepaid), sewage and waste removal. Imbali (unit 1 and 2) and Sobantu had municipal offices in their areas. Transport availability and the condition of the roads were satisfactory in facilitating ease of access to community municipal pay points or central municipal pay points for service payments. However, the available monies and time required to access the pay points varied. Communities had similar community political structures comprised of councillors and ward committees. However, their efficiency, approachability and political agendas varied e.g. three councillors endeavoured to prevent the research taking place and one councillor held parallel community meetings to the research meetings and threatened community researchers.

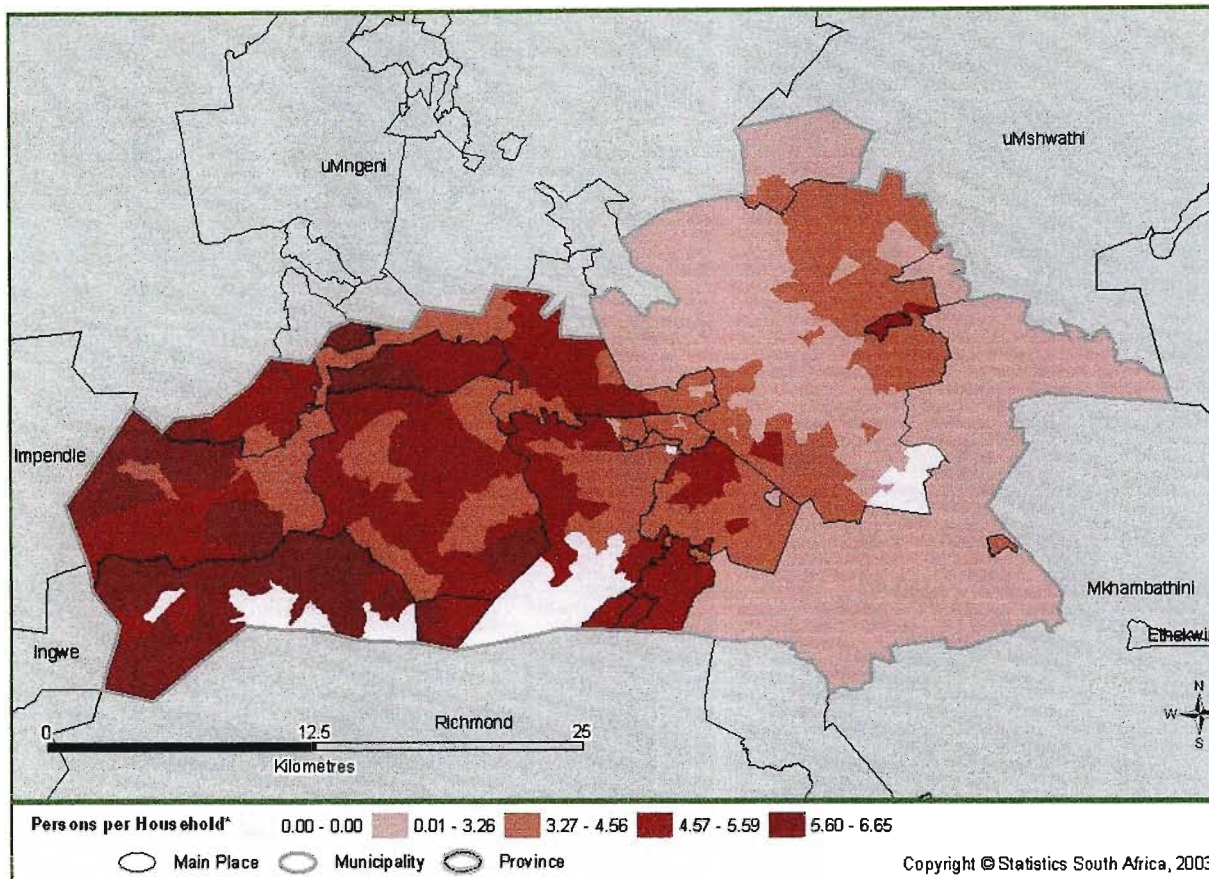
4.1.2 Characteristics of household demographics and socio-economic status

All households represented in the study were black South African households. The population size for Black South Africans residing in each area were the following: Imbali, 31284 (incorporating all units within Imbali); Haniville, 877; Sobantu, 7732; and Thembalihle, 5482 (Msunduzi city planners, 2003). The majority of households (94.9%) owned their property and the average household size included 5.4 members (reflected in table 4.2). The average household sizes per area are listed in descending order: Sobantu 6.5, Imbali (unit 1) 5.6, Haniville 5.1, Thembalihle 5.0 and Imbali (unit 2) 4.9. The average household size (for all areas) is 5.4 persons per household. However, it is assumed that the backyard shack residents were not included as 'household members' by the respondents. The provincial household size (all races) is 6 persons per household and the national average household size (all races) is 5.4

(consistent with study) as stated by Census 2001. However, this data does not include cluster household residents (Statistics South Africa, 2003). Refer to figure 4.2. Therefore, it is the researcher's opinion that the average household size may be closer to 8-persons per household. Refer to figure 4.2, which indicates that the households included in the survey, fell into the higher population size range. Unaccounted for backyard shack residents may not contribute to income levels, but additional members would influence the amount of water consumed. There was no differentiated regulation of water use between shack residents and household residents. It was voiced that water was a basic human need and that all residents should have the same right and freedom to the water required. If back yard shack residents were expected to pay rent, the monies where not divided into specific utility payments e.g. a proportion of the rent payments designated to water was not evident.

Table 4.2: Average household size per study area.

Number of people per household	Study areas						
	Imbali unit 1	Imbali unit 2	Haniville	Sobantu	Thembalihle	Total number of households per study area	Percent (%)
1	1	2	3	0	2	8	2.5
2	5	1	5	5	8	24	7.6
3	7	5	16	4	9	41	13.1
4	8	8	19	9	10	54	17.2
5	8	10	13	9	12	52	16.6
6	4	3	12	8	8	35	11.1
7	10	6	5	15	5	41	13.1
8	3	3	7	12	1	26	8.3
9	2	0	4	5	2	13	4.1
10	2	0	2	3	2	9	2.9
11	1	0	0	2	1	3	1.0
12	0	0	1	3	0	5	1.6
13	2	0	1	0	1	3	1.0
Total	53	38	88	75	60	314	100.0
Average household size	5.6	4.9	5.1	6.5	5.0	Average for all areas = 5.4	



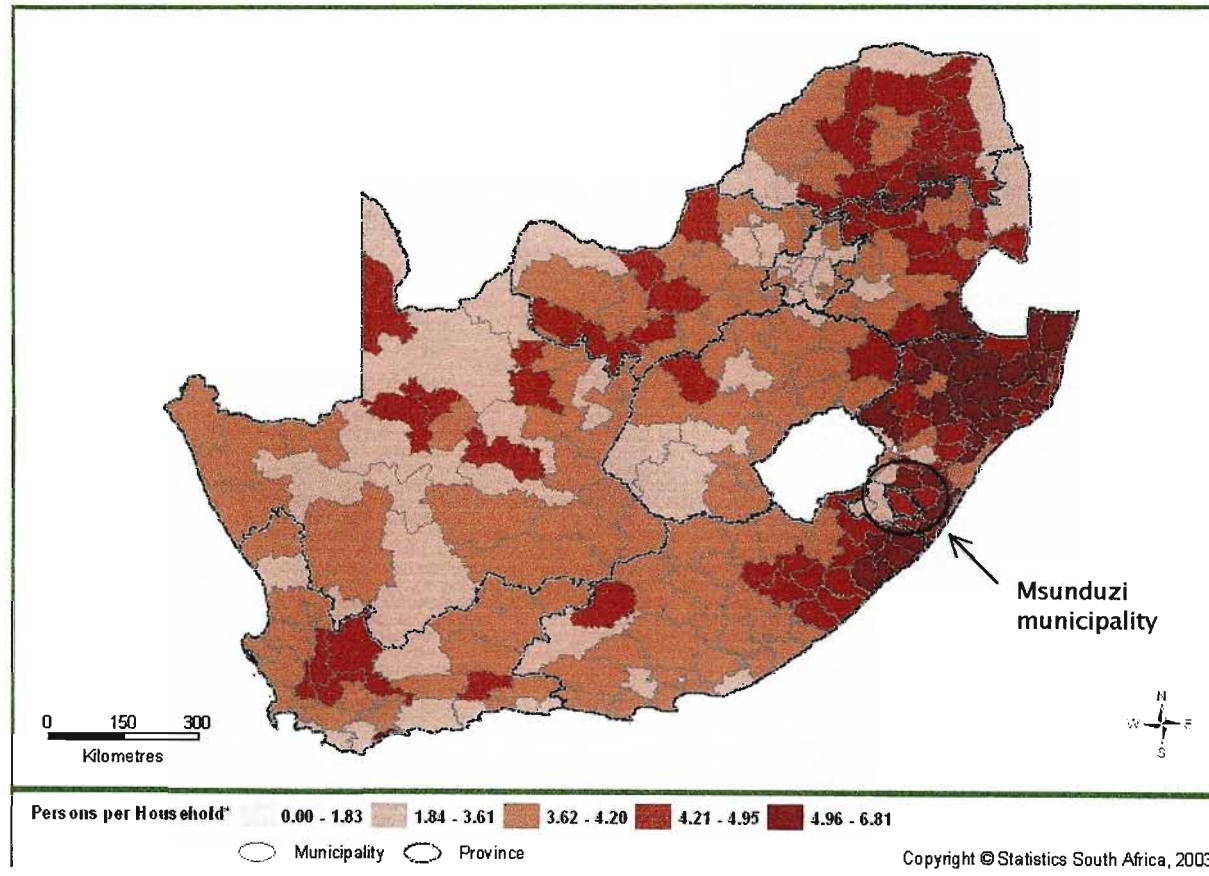


Figure 4.2: Map of average Msunduzi and South African household size (all races) [Statistics South Africa, 2003].

Most households (60.5%) had no one employed while 31.4% of households had one or more members employed (refer to table 4.3). The study's figures of households with no one employed (60.5%) are higher than Census 2001 figures that state Msunduzi unemployment rate (all races) at 49% (cited by Coetzee and Newport-Gwilt, 2003). Households with no one employed per area are the following and listed in descending order: Imbali (unit 2) 78.9%; Thembalihle 78.3%; Imbali (unit 1) 58.5%; Sobantu 56%; and Haniville 45.5% (see table 4.3). Twenty eight percent (28%) of households received one pension grant and 16.2% of households received child support or disability grants (total number and differentiated grants per household is unknown). The illness status of households was indicated as 27% of households having at least one seriously ill member. The commonest type of identifiable illness was elicited as tuberculosis, with an assumption that the tuberculosis and HIV/AIDS links were strong.

Table 4.3: Average number of household members employed and no one employed per household per study area.

Areas	Number of household members employed per area								Total
	0	Percentage of no one employed	1	2	3	4	5	6	
Imbali 1	31	58.5	13	4	4	0	0	1	53
Imbali 2	30	78.9	8	0	0	0	0	0	38
Haniville	40	45.5	41	7	0	0	0	0	88
Sobantu	42	56	25	3	3	1	1	0	75
Thembalihle	47	78.3	11	0	1	0	1	0	60
Total	190	60.5	98	14	8	1	2	1	314

The majority of households (83.5%) have a total income of less than R1200 per month, the average total monthly household income for all areas in the study was R932.17 and the households were therefore characterised as low-income households (earning less than the minimum South African income of R1100 as used by DPLG, 2003): comprising 23.9% earning the midpoint of the range of R0-R600 (R300) per month and 59,6% earning the midpoint of the range of R600-R1200 (R900) per month (refer to table 4.4). Average total income per area is indicated in descending order: Sobantu (R1158.66), Imbali unit 1 (R1100.00), Imbali unit 2 (R976.32), Haniville (R831.82) and Thembalihle (R620.00). It is important to note that the total average household income for all areas in the study (R932.17) is less than the Msunduzi indigent's policy benchmark of R1378 per month (refer to section 2.14) or the R1100 per month (indicated by the DPLG as the minimum monthly income). Hence, if the average total monthly household income were taken (for all areas), all the households would (on their

average total monthly household income) qualify as indigents[1]. The average household income per area was cross tabulated with the average household size per area and the results were as follows for a per person income equivalent (descending order): Imbali (unit 2) R199.25 (4.9), Imbali (unit 1) R196.43 (5.6), Sobantu R178.26 (6.5), Haniville R163.10 (5.1) and Thembalihle R124.00 (5.0). If the total average household income for all areas (R932.17) were cross tabulated with the average household size for all areas (5.4) then the average per person income equivalent would be R172.62. The figure of R172.62 puts the average income per capita (no age differentiation) below the supplementary living level (R220.10), per adult equivalent household subsistence level (R251.10) and the income poverty line per adult equivalent of R237.00 (May et al, 2003). Moreover, considering average monthly income per capita, it is plausible to assume (despite failures to obtain detailed expenditure data, see 5.2.1) that the large majority of households, in the study, are part of the population cut-off at 40th percentile of households ranked by adult equivalent expenditure (297.29), the 50% of national per capita expenditure (R201.82) and would, according to May's (1998) classification, be part of the 40% of South Africa's 'poor', indicated by having less than a monthly household expenditure of R353 per adult equivalent (Leibbrandt and Woolard, 1999 cited by May et al, 2003).

Table 4.4: Number of households within an income range per study area.

Study areas	Total range of income per study area						
	R300*	R900*	R1600*	R2500*	R3500*	R4500*	Total average income per area
Imbali 1 (n=53)	11	28	8	5	0	1	R1100.00
Imbali 2 (n=38)	3	31	3	0	1	0	R 976.32
Haniville (n=88)	22	57	8	1	0	0	R 831.82
Sobantu (n=75)	4	52	14	2	2	1	R1158.66
Thembalihle (n=60)	35	19	6	0	0	0	R 620.00
Total (n=314)	75	187	39	8	3	2	R 932.17
Percent all areas falling into specific income bracket	23.9%	59.6%	12.4%	2.5%	1.0%	0.6%	

* Midpoint of the range of R0-R600 (R300), R600-R1200 (R900), R1200-R2000 (R1600), R2000-R3000 (R2500), R3000-R4000 (R3500) and R4000-R5000 (R4500).

[1] Household total average income levels below the indigent policy or minimum monthly income are important when determining which households to target with lifeline water tariffs or basic service subsidies. The low-income households, in the study, fell into the potential targeted low-income category, and therefore provided a plausible group of households who should be benefiting from local and national policies and strategies in promoting improved livelihoods, relieving affordability constraints and maintaining household well being (to be unpacked and discussed in chapters 5 and 6).

The variables of 'total average household income' and 'other household income' were analysed using Pearson's Chi-Square tests for the effect of pensions or grants on total average household income. It was found that pensions and grants made a significant contribution to the total households' income (p=0.001). This was reflected in the higher total household incomes of Sobantu and Imbali units 1 and 2, which had significantly more households holding pensions then Haniville and Thembalihle. This was plausible owing to the fact that Haniville and Thembalihle were relatively newly established communities and therefore did not have an aging population. Child support grants were distributed evenly in all areas.

Figure 4.3 provides a graphical illustration of the demographic household characteristics for each study area for the purposes of clarity and the interrelationship of demographic variables.

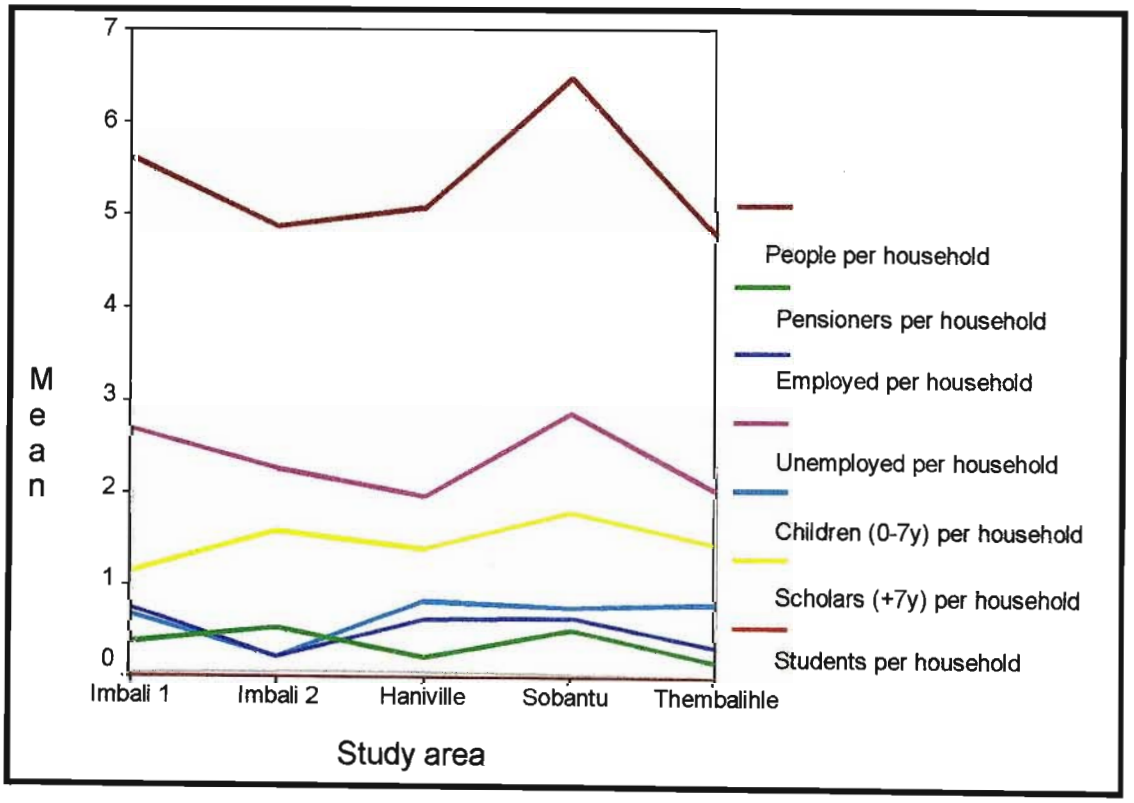


Figure 4.3: Demographic household characteristics per area.

The characteristics of household demographics and socio-economic statuses of the five study areas were relatively comparable. Albeit differences did occur in average household income, income per capita, frequency of pensions or grants, household size and dependants; these were especially apparent in Thembalihle. Nevertheless, a

relatively analogous household demographic and socio-economic picture can be drawn for all study areas (where there are marked differences, these will be stated).

4.1.3 Characteristics of community water service delivery

Almost all households (98.4%), in the study, had on site taps (not in-house). Water services were delivered through one tap connected above a concrete sink and attached to water-borne sewage, which was housed within a small concrete structure. Water was used at the sink or carried by buckets or other containers to the homestead. Households not connected to water utilised the water and sanitation of neighbouring households. Almost all households (94.9%) in the study were metered. Two types of meters were used: Invensys and Kent. The meter connections were either in-yard or approximately 15 metres outside the yard. Water was used for a variety of household purposes e.g. cooking, drinking, cleaning, washing clothes, bathing, sanitation, economic purposes and small food gardens.

Water volumes consumed per person per day as provided by households[2], ranged from 0-25 litres (47.3%) and 25-50 litres (42.0%) and are presented in figure 4.4. Albeit per person and per household consumption figures as provided by households may not be accurate, as they were not verified with specific water usage data (e.g. volume of water used per activity and frequency of activities for bathing, washing, cleaning, flushing toilets etc). Nevertheless, if the household-provided volumetric figures were used in conjunction with the average household size (5.4 members) then average household water consumption should range from 135-270 litres per household per day or 200-400 litres if an 8-member household were used (accounting for backyard shack residents).

[2] As low-income households generally carried water from outside taps in containers for inside use, water consumption figures were calculated in terms of the number of containers used per day (where water was used directly, at the tap, sink or toilet, it is assumed that these quantities were excluded from household calculations). However, regardless of the calculation method used, the consumption figures provided by households were inconsistent with municipal consumption records.

Because the accuracy of household-provided individual and household water consumption data was in doubt[3], the data was triangulated with municipal statistics. Chapter 5 presents the municipal statistics for monthly household consumption (not for each household surveyed in the study, but an average figure for low-income households in the Msunduzi area). The results of the study acknowledge the consumption figures provided by households. However, they rely predominately on municipal statistics as a means to present a more accurate data source and account for backyard residents (excluded from household data) and the impact of household size on water consumption.

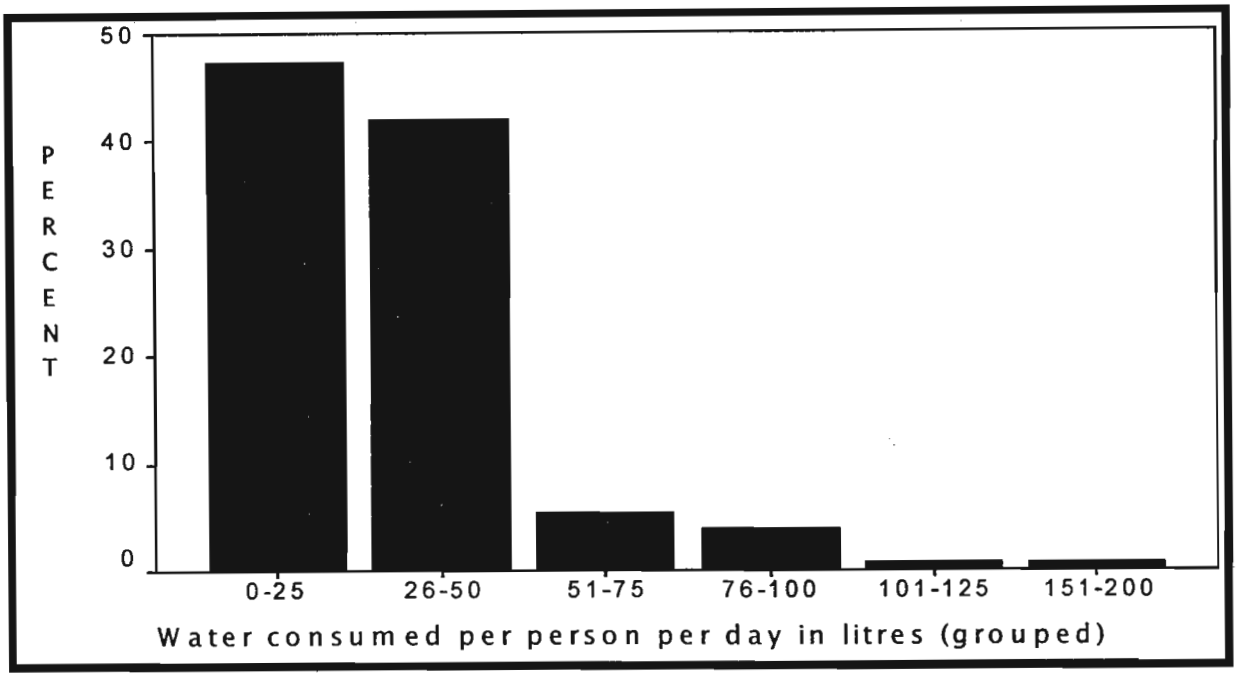


Figure 4.4: Water consumed per person per day in litres (figures from households in study).

4.2 Characteristics of community researchers

The 25 community researchers were black South Africans. Both genders were represented: 10 females and 15 males. The average age of the community researchers was 25 years of age. The majority of community researchers were unemployed.

[3] It is the researcher's opinion that it is difficult for individuals and households to provide accurate figures of per person and per household water consumption, rather more accurate statistics could be obtained via actual monthly household water bills. Numerous consolidated municipal bills were seen by the researcher, facilitated by community meetings whereby community meetings were encouraged to bring their water bills. The figures were consistent with the municipal official data, stating that average low-income household monthly consumption was in the range of 20-25 kilolitres (further discussed in section 5.1.2).

However, they were active in their communities and engaged in various social activities e.g. local development committees and community based organisations (forming part of the GREEN network- a Greater Edendale environmental and development based network). The majority of community researchers had never participated in research activities prior to the study. The community researchers indicated that their reasons for participating in the study were to learn research skills, to acquire information, to change the prevailing social norms and to socialise with different individuals. However, the common trait that bound the community researchers was a passionate interest in social issues and to gain different perspectives. Because the community researchers lived in the areas in which the study was conducted, they shared similar socio-economic statuses as the households they surveyed. Furthermore, the community researchers' understanding of the water service delivery situation was consistent with the households included in the study, as they, too, faced similar water service delivery frustrations or concerns on a daily basis and could provide greater insight into community water service issues.

4.3 Characteristics of external stakeholders

Two different external stakeholders' perspectives were included in the study: government and civil society organisational perspectives. Government institutions included municipal departments, of Msunduzi water department, treasury and administrative department and city engineer officials. The researcher conducted informal interviews with local municipal departments through personal or telephonic communication. Opinions were sought on specific aspects of the survey with the objective of information sharing, verifying statistics and experiences, and challenging officials on inconsistencies between policy, strategy and implementation.

Civil society perspectives were sourced through individuals working on water-related issues in non- governmental organisations (Alternative Information and Development Centre, Environmental Monitoring Group and Rural Development Services Network) and community based organisations/movements (Anti-Eviction Campaign, Anti-Privatisation Forum and Soweto Electricity Crisis Committee), public unions (South African Municipal Workers Union and Public Services International), university institutions (Municipal Services Project and University of the Witwatersrand) and the South African Civil Society Water Caucus. The researcher conducted informal

interviews with civil society organisations pre and post-study through personal, telephonic or e-mail communication. The objective of engaging with civil society individuals was to share information, draw on valuable resources and experiences, gain greater insight into municipal water service delivery and the political dynamics involved in national policies and strategies.

4.4 Summary

The sample of low-income households came from the Msunduzi municipality; with five areas sampled: Imbali (unit 1), Imbali (unit 2), Sobantu, Haniville and Thembalihle. Community amenities were basic but available and accessible. Dwellings were of limited size and approximately a quarter to a half of houses had household-extensions to accommodate backyard shack residents. Households accessed the following basic services: piped water, electricity (billed monthly or prepaid), sewage and waste removal. The characteristics of household demographics and socio-economic statuses of households were comparable. The average household included 5.4 members (increased to 8-members to account for backyard shack residents); had a high unemployment rate; an average monthly total household income of R932.17 (pensions and grants were a significant contributing factor); qualified for indigent subsidies/benefits; and approximately every third household had at least one seriously ill member. The majority of households (98.4%) had on-site taps (not in-house) and were metered (94.9%). Water services were delivered through one tap connected above a concrete sink and attached to water-borne sewage, housed within a small concrete structure. Water was used for a variety of household purposes. Average per person consumption, as provided by households, ranged from 25-50 litres per person per day, 135-270 litres per household per day and 6-12 kilolitres per household per month. It was noted that municipal consolidated bills and Msunduzi municipality consumption statistics were more accurate in obtaining accurate water consumption figures. Therefore, the study relied on municipality obtained statistics, which are discussed in Chapter 5. Community researchers had comparable socio-economic characteristics with the households included in the study. External stakeholders included government and civil society representatives.

The characteristics of the sample area, community amenities, household demographics, socio-economic status, community water service delivery, community researchers and

external stakeholders were provided as a background for the experiences of low-income households to national and local policies and strategies. Chapters 5, 6, 7 and 8 will provide substance to the outline provide by the sample characteristics.

CHAPTER 5
RESULTS: EXPERIENCES OF MSUNDUZI LOW-INCOME HOUSEHOLDS

In assessing whether 'South Africa's water service delivery policies and strategies are equitable, accessible, affordable, efficient, effective and sustainable to Msunduzi low-income households,' the results unpack the implementation of local and national policy and strategy from the perspective of Msunduzi low-income households. Hence sub problem one: 'what is the experience of Msunduzi low-income households to municipal water service delivery' is systematically discussed and linked to sub problem two which is presented in chapter 6. The results relating to sub problem one are provided within the survey themes, as indicated in section 3.4, and discussed to provide clarity and understanding of the experience of Msunduzi low-income households to water service delivery. The water themes are the following: water systems, affordability mechanisms, administration systems, and water service efficiencies and effectiveness. The variables of equity, accessibility, affordability, efficiency, effectiveness and sustainability are linked to the themes, in chapter 6, to address the research problem.

5.1 Water systems

Water systems included water pressure, water quality and the social value of water. Water volumes were provided in litres or kilolitres consumed per person and per household per day and month to highlight household volumetric uses, access to the free basic water (FBW) utility and low-income household affordability. The experience of low-income households to the FBW policy was presented in terms of access to the FBW utility (0-6 kilolitres [kl]) and the resulting affordability constraints when the lifeline tariff (provided by the FBW policy) was not accessed by low-income households. Meters were discussed because they were the chosen method, by the municipality, to monitor household consumption. Water leakages were discussed as if they were common and poorly prioritised; they affected household affordability, access to the basic water requirements and sustainability of the resource.

5.1.1 Water pressure, quality and value

Water pressure as indicated by the majority of households (80,1%) was good. Most households (72.8%) indicated that water quality was good with little evidence of

contamination. The social value of water was indicated as valuable with the majority of households (94,2%) stating that water was very important and essential for survival (on a Likert scale of 1-3). See appendix C.

5.1.2 Water volume consumed

Households reported that per person per day volumes consumed ranged from 25-50 litres (refer to figure 4.3) or approximately 6-12kl per household per month. Household-provided volumetric data was inconsistent with the Msunduzi municipality who reported that low-income household monthly consumption ranged from 20-25kl (Municipal administration, 2003 consistent with RDSN, 2003- see section 2.13). Msunduzi municipal figures (using the midpoint of 22,5 kilolitres per household per month) amounted to 750 litres per household per day or 93.75 litres per person per day (calculated on an 8-member household[1]). It was evident that the Msunduzi municipal volumetric data was substantially higher than the consumption figures provided by low-income households. This implied that low-income households struggled to provide accurate figures of water volumes consumed per day, were unable to link water-use activities with actual volumes consumed per person per day, were unable to understand municipal consolidated bills as well as the indication that water meters were neither understood nor utilised as water-monitoring tools.

It is important to note that municipal consolidated bills where not used by the community researches in obtaining water volumes consumed. This method was purposively implemented to endeavour to facilitate household conceptualisation of daily water volume consumed with special regard to water usage activities to determine per person basic water requirements. Prior to the survey implementation, community researchers were trained to equate water collection implements (buckets and other) with the corresponding amount in litres. The subsequent research processes (community workshops and house-to-house information dissemination) encouraged the analysis of household municipal bills by community members. This exercise revealed consumption figures consistent with Msunduzi municipal consumption figures. However, it is acknowledged that per person per day consumption figures would have been more

[1] Household size for the study is calculated on 8-persons per household to include backyard shack- dwelling water-using residents (see section 4.1.2).

effective and accurate if obtained in conjunction with household municipal consolidated bills.

Households reported that weekday and weekend water volume consumption differed; that weekend water consumption was double that of weekday consumption. These differences were attributed to increased frequencies of water use activities and different water use activities e.g. increased household washing, water for recreation and visitors or more household members staying at the home for longer periods.

A high proportion (81,9%) of households indicated that the water consumed was sufficient for household activities. However, households were not restricted by economic measures, as the Msunduzi municipality had not implemented a broad credit control policy. Households continued to use the water, as required, for household activities and were not limited by punitive measures for non-payment. Water bills continued to arrive and arrears increased. However, few households limited their water consumption (only 10 out of 314 households had initiated self-restriction mechanisms). Households unable to pay for their water and exceeding the FBW utility, continued to reap the benefits of an unrestricted water supply. Many households, making no effort to pay for their water, maintain that water is a human right and gift from God, inability to pay therefore should not, according to these households, restrict their access. It is envisioned that until credit control is institutionalised and monetary value attributed to water, water usage patterns will remain unchanged. What remains to be seen is that when restrictions do become institutionalised, will households be satisfied and able to continue meeting daily household water requirements within the Msunduzi municipal restrictions?

5.1.3 Free basic water

The free basic water (FBW) policy was implemented in the Msunduzi municipality jurisdiction on the 1st December 2001 (Msunduzi Municipality, 2001). The FBW policy, as implemented in the Msunduzi municipality, allowed for 6kl per household per month, 200 litres per household per day or 25 litres per person per day (per 8-member household). If more than 6kl per household per month was consumed then households were expected to pay the full costs for the water consumed i.e. the full 6kl costs plus any additional kilolitres used over the first 6kl (at the standard tariff rate). As stated in

section 5.1.2, municipal statistics indicated that Msunduzi low-income households used between 750 litres per household per day or 93.75 litres per person per day. This meant that low-income households, having 3 or more members, struggled to access the FBW utility and therefore were required to pay the full cost for the water consumed.

Research data indicated that 100% of households, included in the study, were not accessing the FBW utility (benefiting from using less than 6kl per month). Noting that 10.1% of households (see table 4.2) had 2 members or less and therefore should, by indication of Msunduzi municipality statistics, be accessing the utility of FBW, numerous possibilities exist to account for the 100% statistic: households were receiving FBW but were consuming more than 6kl therefore they were unable to access its utility; households were uninformed (81.2% of households knew nothing about FBW and hence did not know if they were receiving it) or were not paying household municipal consolidated bills (in 38.2% of households no one took responsibility for payment therefore those particular households did not know whether they were receiving their water for free or not- refer to table 5.3). Unfortunately, Msunduzi municipal statistics on how many low-income households were accessing the utility of FBW were neither available nor accessible. Such municipal statistics would be an invaluable indicator of the success of the FBW policy.

5.1.4 Meters

The municipality, as a tool to measure and monitor household water consumption and provide the FBW allocation, used meters. As stated in section 4.1.3, the majority of households (94.9%) were metered. The municipality maintained the meters and monitored household monthly consumption via municipal meter readers who documented monthly household meter readings. If understood by households, meters were a valuable tool for self-monitoring household consumption, checking volumes consumed against water bills and detecting water leakages.

Most of the households (81.8%) were not satisfied with the way meters were monitored by municipal meter readers. Their dissatisfaction was attributed to the manner in which their meters were read (by municipal meter readers) and their (the households) general lack of understanding on how meters operate. Households indicated that municipal meter readers did not read the meters frequently, readings were inaccurate or estimated

(resulting in varying water costs per month) and a general air of scepticism and poor community acceptance of meters and municipal meter readings existed. Municipal meter readers claimed that they did read the meters but they were often prevented from doing so as the household members were often away at the time of reading (hence the municipal meter readers could not be monitored or witnessed) or the meter readers were scared of household dogs and were afraid of entering the yards. Households voiced that they required basic information on how meters were operated, how the 'dials' were read and how the readings corresponded with the monthly bills to ensure that they could monitor their water usage and check that they were not being overcharged. In addition to the confusion on the operation of meters, meter readings were not consistently taken on the same day each month so municipal consolidated bills did not reflect a constant date, time duration or volume used. This compounded the difficulty of households to monitor meters and billing. Meters, connected to an efficient computer programme, could be managed effectively. However, the administrative department stated that the current computer systems were outdated, with the implication that monitoring was difficult and current and reliable statistics were lacking.

Despite the widespread dissatisfaction of households to meters, a large percentage of households (68.8%) indicated that meters were still a good tool in service delivery. However, when asked to provide possible meter alternatives, 85.9% of households suggested non-specified alternatives. This emphasised the perceived uselessness of meters for household monitoring in the absence of information and the necessity to find socially acceptable alternatives accompanied by usable consumer information.

5.1.5 Leakages

Most households (77.1%) had leakages, after the meter position (this figure was consistent with the findings by the Msunduzi city engineers, 2003). See table 5.1. Leakages were present at one or more of the following sites: at the meter, after the meter (on the pipe connecting the tap), at the tap, on the pipe connecting the toilet and in the toilet. This was a significant concern for households and was shared by the Msunduzi city engineers (2003). Leakages were not dealt with promptly and continued to drip, spurt or gush. Leakages, as indicated by households, could be attributed to

shoddy workmanship or inferior materials used by contractors, aging systems[2], high pipe pressure or poor maintenance and management. The inefficient or delayed fixing of leakages by households could be ascribed to: lack of personal capacity in fixing leakages or household affordability and time constraints. The inefficient or tardy fixing of leakages by municipalities could be attributed to inefficient notification systems, a lack of budgetary or financial support for maintenance projects, insufficient staff or the low prioritisation of maintenance operations on a political level. Table 5.1 depicts the number of households experiencing leakages (at the meter, after the meter (on the pipe connecting the tap), at the tap, on the pipe connecting the toilet and in the toilet) per area.

Table 5.1: Number of households experiencing leakages per study area.

Study areas	Were households experiencing leakages?			
	No	Yes	Total n=306	Total number of households experiencing leakages %
Imbali (unit 1)	3	50	53	94.3%
Imbali (unit 2)	8	29	37	78.4%
Haniville	27	59	86	68.6%
Sobantu	27	45	72	62.5%
Thembalihle	5	53	58	91.4%
Total	70	236	306	77.1%

Leakages that were not dealt with promptly and continued unabated presented households with a challenging affordability problem. If households could not cover the loss, then municipalities assumed the economic burden, which through the cycle of responsibility, were transferred to households through higher tariffs thereby increasing the financial burden of households. The Msunduzi city engineers (2003) expressed that they were mandated by the Msunduzi municipality to fix leakages pre- and at the meter but that they were also endeavouring to assist households and would repair post-meter leakages but would charge for their services, which could be paid for through instalments (see figure 5.1). This avenue was explored, by the researcher (water department toll free number: 0800 001868, 2003); however, it was found that this service was not being implemented and that households would have to hire a private plumber if the leak fell after the meter position. Under the current system (where water

[2] The approximate date of service water pipe installation is correlated with the date of the establishment of study areas and is the following (provided by community researchers): Sobantu [1930], Imbali (unit 1) [1950], Imbali (unit 2) [1955], Haniville [1990] and Thembalihle [1996].

demand management is not prioritised), it would be interesting to ascertain the water volumes and monies lost per day/month/year. Water losses have serious implications for the financial and environmental sustainability of low-income households, municipalities and South Africa and may push the Department of Water Affairs and Forestry (DWAF) to source further water supplies through expensive and unsustainable measures as big dams or alternative water catchment areas or basement transfers (National Water Resource Strategy, 2002). The National Water Resource Strategy (NWRS) is admittedly weak on water demand management and conservation management and is consistent with the (prioritisation of leakages) position taken by the Msunduzi municipality (personal communication with DWAF director of strategic planning involved in compiling the NWRS, 2003).

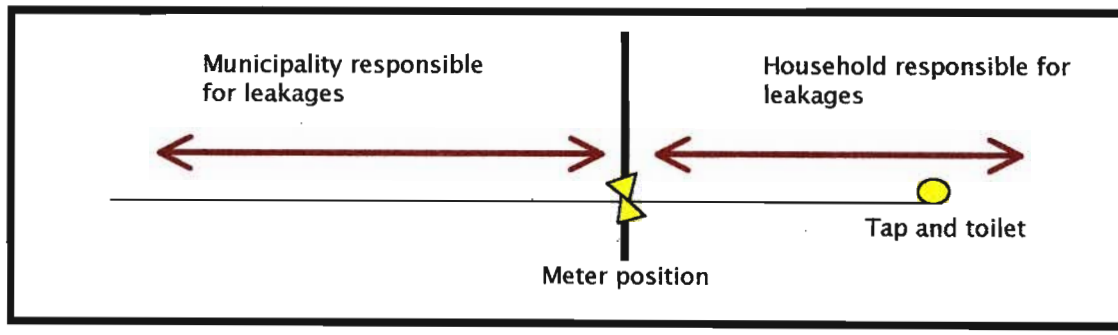


Figure 5.1: Municipal and household leakage responsibilities (Msunduzi city engineers, 2003).

A water leakage project and water audit had been launched in Msunduzi at the time of the study. However, the specific details were still pending. Widespread water leakages had significant implications for households, municipalities and South Africa: leakages could decrease household access to the FBW utility (households pushed into higher stepped block tariffs- thus resulting in inability to access the 6kl allocation), increased affordability problems to households (paying for lost water and paying at higher tariff rates) and municipalities (in cases of non-payment or unaccounted for water, which are transferred to households through higher tariff rates) and ultimately compromised environmental sustainability of the resource.

5.2 Affordability mechanisms

Household affordability was explored by analysing average low-income household basic service expenditures, essential and additional needs with average low-income household total income levels. Water costs were isolated and presented as a proportion

of total household incomes. Tariffs were linked to the average low-income household water consumption levels and their implication for total water costs and low-income household affordability were discussed. Cross-subsidisation was presented as a method for ensuring that low-income households could continue accessing the basic water requirements (at an affordable tariff) by ensuring adequate cross-subsidisation from high volume consumers, who were charged at higher tariffs. The 'willingness and ability ' of households to pay water costs was unpacked to explore if the water charges were socially acceptable.

5.2.1 Affordability

Basic service expenses for low-income households, included in the study, were approximated and calculated for the following basic services: water (22.5 kl per month), electricity, waste removal and sewage, and were as follows: water costs R109.80 (22.5 kl); electricity costs R200.00; waste removal costs R19.53 and sewage costs 20.75 (service figures did not include monthly arrears repayments). The total for the approximated household expenses was R350.08[3] (refer to table 5.2).

Table 5.2: Basic service expenditures for low-income households, included in study.

Water (22,5kl average)	=	R109.80
Electricity	=	R200.00
Waste removal (flat rate)	=	R 19.53
Sewage (flat rate)	=	R 20.75
TOTAL (excluding VAT and arrears repayments)	=	R350.08

Using the following low-income household midpoint categories of income, R300, R900 and R1600, the proportion of income spent on basic service expenditures was the following: 116.69% of R300, 38.9% of R900 and 21.88% of R1600. If the average total income for all areas in the study was used (R932.17, refer to table 4.4), then the proportion of income spent on basic service expenditures was 37.56% (consistent with Pauw (2003), Public Citizen (2002b) and Bond (2001) who stated that basic service expenditures for low-income households ranged from 25-50% of total household

[3] The low-income household basic service expenses were derived from analysing municipal consolidated bills, focus groups with community researchers and community meetings with the wider communities (included in the study). This was necessary as the data derived from the surveys were generally incomplete and it was necessary to triangulate data to ensure a greater degree of accuracy.

income, refer to section 2.11). If monthly water costs were isolated then the proportion of income spent on monthly water bills (R109.80) was the following: 36.6% of R300, 12.2% of R900, 11.78% of R932.17 (average total income) and 6.9% of R1600. If water and sanitation expenses were added together (averaged at R130.55) then the proportion of income spent on water and sanitation payments rose to 43.5% of R300, 14.5% of R900, 14.0% of R932.17 (average total income) and 8.2% of R1600. These figures were much higher then the socially acceptable tariff rates of 3-7%, as cited by Pauw (2003) in section 2.12, and illustrated the significant affordability problem faced by low-income households (especially low-income households at the bottom of the low-income range who were not receiving social grants). Table 5.2 excluded arrears repayments, which ranged from R3000 to R10 000 per household (triangulated with community researchers through focus groups and communities included in the study through community meetings) and value added tax (VAT) at 14% on service expenses. Both arrears payments and VAT compounded affordability constraints and decreased monies available for other essential and additional needs (discussed below).

Basic service expenditures left little monies for other essential needs e.g. rent, food, schooling, transport, sanitation and hygiene requirements, medicines and emergency funding. Additional needs might include: life and medical insurance, burial and pension schemes and furniture repayments. Essential and additional needs to the basic service expenditure equation left households struggling to balance their daily needs with compulsory payments to secure basic services. Furthermore, although basic service expenditures were relatively uniform for many low-income households, the amount of remaining income (after services had been paid for) utilised for household well being (food, schooling, transport, medicines etc) was influenced by household size, number of children and scholars, and ill members.

The majority of households (95.1%) indicated that their water charges were unaffordable. It is important to note that the consolidated municipal bill included water, electricity, waste removal and sewage and it is unknown if 'water' in the question was considered as all of the above or as a separate entity. The affordability constraints relating to water and other basic service expenditures, as indicated by households in the study, were due to the following: household money was stretched (service expenditures and other basic needs); water was too highly priced; there were high arrears repayments

(67.2% of households were in arrears); households had no one (60.5% of households) or only one member employed (31.2% of households); approximately one-third of households were surviving on government grants (see section 4.1.2) and household total income was low in relation to basic service expenditures. An additional factor affecting water affordability, as voiced by households, was poor service quality. This was interesting as households were linking service quality to water costs hence the service provided was not deemed worth the money that was necessary to pay for it (consistent with Hazelton and Kondlo, 1998, cited in section 2.11).

As indicated in the above-mentioned paragraphs, basic service expenditures were high in relation to available household income (consistent with Public Citizen, 2002b, cited in section 2.11). The burden of water payment responsibility fell predominately on mothers, pensioners and other female members (refer to table 5.3). This illustrated the gender inequity involved in water payment responsibility thereby putting increasing pressure on already financially and time-burdened members of society.

Table 5.3: Household member responsible for water payments (all areas).

Household member responsible for water payment	Frequency	Percent %
No one	120	38.2
Mother	81	25.8
Father	55	17.5
Pensioner	21	6.7
Owner	20	6.4
Other female household member	15	4.8
Total	312	99.4
Missing responses	2	0.6
Total	314	100.0

Considering the total household income available, the basic service expenditures, essential and additional basic needs expenditures and household water consumption, it was not surprising that affordability constraints had the implication that payment rates were low and arrears were high (refer to section 5.2.3).

5.2.2 Tariffs and cross-subsidisation

Tariff structures and cross-subsidisation were discussed because if correctly equated, they could ease the affordability constraints faced by low-income households and ensure that the basic water requirements for low-income households were met (refer to section 2.12). Stepped block tariffs implemented at regular intervals along the volume

chain, would ensure that low volume water users were charged at lower rates (affordability increased) and high volume water users were charged at higher rates (providing for adequate cross-subsidisation). However as indicated in figure 5.2 below, the Msunduzi tariff structure did not provide an adequate stepped block tariff structure with the implication that low-income households fell into the 2nd block (charged substantially higher than the 1st block) which resulted in the compounding of low-income household affordability constraints and decreased opportunities for cross-subsidisation.

Municipalities set their own municipal water tariffs (supposedly in adherence with the national tariff principles). The Msunduzi tariff structure had two tariff blocks: the 1st block (6kl) was charged at R17, 07 (calculated from original 1st pre-FBW block 5kl tariff at R2.29 + 2nd block 6th kl tariff at R5.11 (+inflation) = R17.07) and the 2nd block (7kl+) was charged at R5, 62 (figures provided by Treasury and Water department, 2003, refer to figure 5.2).

Tariff prior to implementation of FBW			
1st block	0-5kl (R2.29 per kl)	=	R11.45
2nd block	6th kl+ (R5.11per kl)	=	R 5.11
Total for 6kl	(5kl + 1kl)	=	R16.56
Tariff with implementation of FBW			
1st block	0-5kl (2.29 per kl) =R11.45 +6th kl (R5.62) (R5.11+inflation)	=	R17.07
Total for 6kl FBW		=	R17.07
2nd block	7th kl+ (R5.62 per kl)	=	R 5.62

Figure 5.2: Msunduzi municipal derivation of free basic water tariffs.

The implementation of FBW saw the tariff structure largely unchanged. Hence, the monetary value attributed to the tariff structure remained the same; it was only the parameters that changed to incorporate an additional kilolitre (Msunduzi water department, 2003). The tariff structure did not provide lower rates through lower tariffs for low-income consumers of 22.5kl (average low-income household consumption for the study, noting that the majority of low-income households were not accessing the FBW utility) and did not provide disincentives through higher tariffs for water wasters or high volume consumers (refer to figure 5.3). Cross-subsidisation was therefore minimal and low-income household affordability constraints persisted.

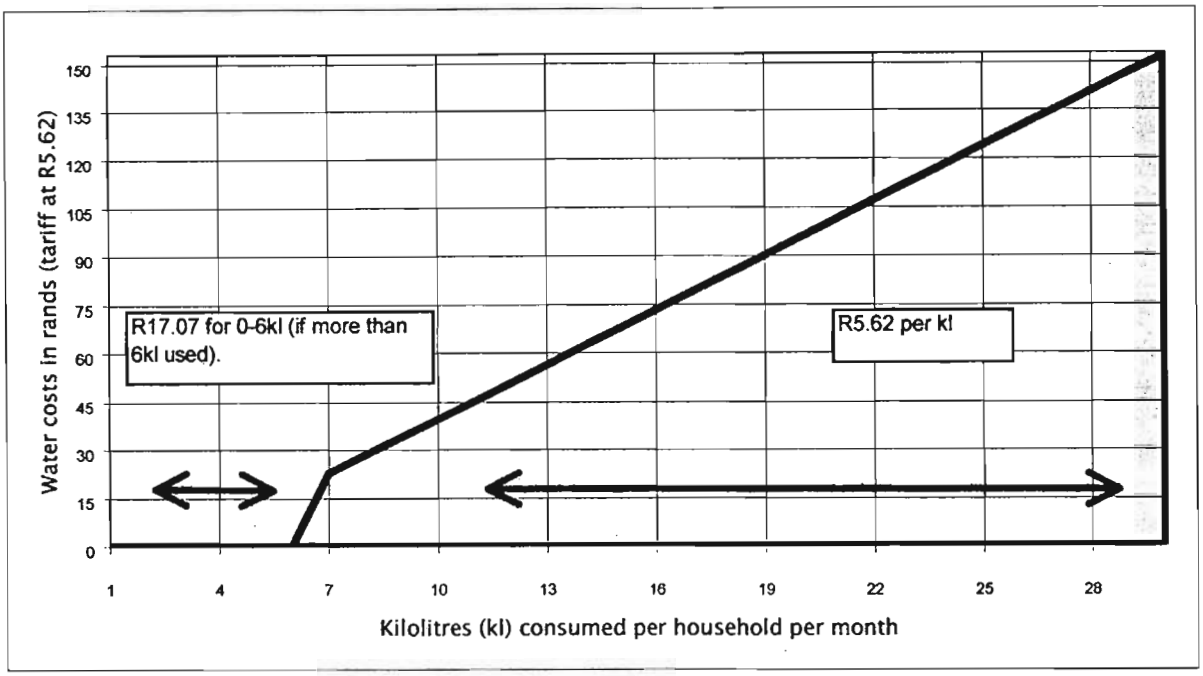


Figure 5.3: Msunduzi municipal tariff structure.

5.2.3 Amounts households were willing and able to pay for water

On reflection of low-income household water expenditures (approximately R109.80, refer to section 5.2.1) and non-payment rates (65.1%[4] of all households in the study, refer to section 5.1.3), households were asked to provide amounts that they were willing and able to pay towards their monthly water bill. The cross tabulation for the average amount all households were willing and able to pay for their water and the total average monthly household income are presented in table 5.4. As evident in table 5.4, it was noted that although households having a lower relative income were prepared to spend relatively less of their monies on water services in monetary terms they actually spent proportionally more of their income on water services than did relatively higher income households (consistent with Public Citizen, 2002b, see 2.11).

[4] The research statistics of 65.1% of households not paying for their water was verified telephonically with the Msunduzi water department. The Msunduzi water department stated that although they did not have the relevant statistics on hand, the figure did appear to be reasonably accurate.

Table 5.4: Cross tabulation of average amount households (all areas) were willing and able to pay and total average monthly household income (all areas).

Households prepared to pay...	What is your monthly household income?						Total	Total percent
	R300	R900	R1600	R2500	R3500	R4500		
R 0	8	7	2	0	0	0	17	5.7
R 5	5	12	3	0	0	0	20	6.8
R 10	22	33	6	5	0	0	66	22.3
R 15	4	3	0	0	0	0	7	2.4
R 20	20	46	5	1	0	1	73	24.7
R 25	0	11	2	0	0	0	13	4.3
R 30	5	22	5	0	1	0	33	11.1
R 35	0	1	0	0	1	0	2	0.7
R 40	0	5	1	0	0	0	6	2.0
R 50	4	34	10	1	0	0	49	16.6
R 80	0	2	0	0	0	0	2	0.7
R100	0	2	4	0	1	0	7	2.4
R150	0	0	0	0	0	1	1	0.3
Total	68	178	38	7	3	2	296	100%
Total average	R15.51	R25.76	R34.60	R17.14	R55.00	R85.00	R25.03	
% of average income	5.17% of R300	2.9% of R900	2.2% of R1600	0.69% of R2500	1.6% of R3500	1.8% of R4500	2.69% of R932.17	
Libhaber's socially acceptable tariff (5%)	R15 of total R300	R45 of total R900	R80 of total R1600	R125 of total R2500	R175 of total R3500	R225 of total R4500	R46.60 of total R932.17	

The variables of 'total average household income' and 'willingness and ability to pay' were analysed using Pearson's Chi-Square tests for the effect of income on willingness and ability to pay. It was found that total household income had a significant effect on the households' willingness and ability pay (p=0.000). It was evident from table 5.4 that households (all areas) with the following total average monthly household incomes were willing and able to pay the following average equivalent in rands towards their water costs per month: R15.51 of R300 (5.17%), R25.76 of R900 (2.9%), R34.60 of R1600 (2.2%), R17.14 of R2500 (0.69%), R55.00 of R3500 (1.6%) and R85.00 of R4500 (1.8%). All households (average total income for all areas of R932.17) were willing and able to pay R25.03 (2.69%) towards their water costs per month. In comparison with the socially acceptable tariff rates (3-7% of total income), as stated by Libhaber cited by Pauw, in section 2.12 and 5.2.1, the amounts households were willing and able to pay towards their monthly water bills were lower than Libhaber's recommendation. If the figures provided for the 'willingness and ability' of households

to pay towards water bills were re-equated to Libhaber's recommendations (cited by Pauw, 2003) then the figures would stand as follows (for 5% of total income, using the average of 3%-7%): R15 of R300, R45 of R900, R80 of R1600, R125 of R2500, R175 of R3500, R225 of R4500 or R46.60 of R932.17 (see last row of table 5.4). It is important to note that household 'willingness and ability' to pay might have been underestimated, as it is human nature to underestimate both the available monies one has, and the monies one is prepared to spend. Nevertheless, the figures presented in table 5.4 are still significant as the gap between what tariffs should be (in socially acceptable terms), what they are, and what is preferred is vast.

Noting that the average monthly water bill was R109.80, it was significant that only 8 households (2.7%) out of the 296 households (who responded to the question) indicated that they would be willing and able to pay their monthly water expenditures (including monthly arrears payments). However, if Libhaber's recommendations were utilised, then only 4.4% of all households in the study had an average total income of R2500 and would therefore fall into the category of households able to afford their average monthly water bill (see table 4.4). This reaffirmed the "national crisis in the affordability of basic municipal services" as cited by Bond (2001) in section 1.2.

It was necessary to identify other variables that might influence willingness and ability to pay, if light were to be shed on increasing payment rates. The dependant variables of 'affordability' and 'satisfaction with the water service provider and service quality' and independant variable of 'willingness and ability to pay' were analysed using Pearson's Chi-Square tests for the effect of perceptions of affordability and satisfaction with the water service provider on willingness and ability to pay. It was found that perceptions of affordability had a slight significance on the households' willingness and ability to pay ($p=0.02$) whilst perceived satisfaction with the water service provider and service quality had a significant effect on households' willingness and ability to pay ($p=0.008$). Households perceiving water to be 'affordable' were prepared to pay the average of R31.07 per month versus the R24.81 (R6.26 less) put forward by households deeming water unaffordable. Households which were satisfied with the water service provider and water quality were prepared to pay the average of R27.38 per month versus the R18.74 (R11.08 less) put forward by households which were not satisfied with the water service provider. Willingness to pay was determined primarily by perceptions of

service quality (incidence and status of leakages, water pressure, water quality), satisfaction with the water service provider (effectiveness and efficiency of municipal administration, responses to problems, service provision and communication) and affordability (including social acceptance of tariffs and to a lesser extent incidences/total amount of arrears). 'Ability to pay' was primarily attributed to household total income, which would be influenced by demographic variables especially household size and expenditure characteristics.

In order to triangulate the significance of satisfaction with the municipality and affordability on willingness and ability to pay, each area's willingness and ability to pay was observed. As indicated in table 5.5, the results support the impact of satisfaction with the municipality and affordability on willingness and ability to pay. Hence, the results were as follows (listed in ascending order of percentage of average total household income per area): Imbali (unit 1) R13.35 (1.2% of R1100), Thembalihle R12.01 (1.9% of R620), Imbali (unit 2) R22.05 (2.2% of R976.32), Haniville R21.87 (2.6% of R831.82) and Sobantu R38.43 (3.3% of R1158.66).

Table 5.5: How much were households (per study area) willing and able to pay for water services.

Amount in rands		Study areas					
Range	Average	Imbali unit 1 n=47	Imbali unit 2 n=36	Haniville n=82	Sobantu n=74	Thembalihle n=57	Total n=296
0.00	0.00	3	0	7	0	7	17
5.00-10.00	7.50	29	13	13	1	30	86
11.00-25.00	18.00	8	12	33	25	15	93
26.00-50.00	38.00	7	10	29	39	5	90
51.00-150.00	100.50	0	1	0	9	0	10
Average per area		R13.35	R22.05	R21.87	R38.43	R12.01	

The differences between the 'willingness and ability to pay' in relation to the separate areas can be primarily attributed to household satisfaction with the municipality (refer to table 5.6) and to a lesser degree to total average monthly household income. e.g. Thembalihle had the lowest income per household (R620) and was least satisfied with the municipality (and had the highest number of respondents indicating that water service delivery should be 'improved'-23/37, refer to table 5.7); whilst Sobantu had the

highest income per household (1158.66) and was the most satisfied with the municipality (and had the highest number of respondents indicating that water service delivery was 'fine'- 9/37, refer to table 5.7).

5.3 Administration systems

Administration systems encompassed two facets of water service administration: payment and water service delivery reporting channels. Payment channels addressed the delivery and receipt of municipal consolidated bills, payment points, household members' responsible for payment and options for disputing or querying consolidated municipal bills. Water service delivery reporting channels reflected community structures and municipal structures available and accessible in reporting faults, issues or queries for information.

5.3.1 Payment channels

Municipal consolidated bills were delivered through the post or by hand (where post boxes were absent) for all communities in the study. The administration of consolidated municipal bills (CMBs) as reported by households, included in the study, were as follows: 38.4% = fine; 33.1% = poor; and 28.5% =very poor. Households reported that CMBs were not delivered consistently on a standard date, sometimes did not arrive or were delivered to the incorrect address. The data reflected that households were generally not satisfied with the administration of CMBs.

The format of the CMBs included the household address, name of account holder, account number and covered three different services: water, sewage and refuse removal. Water was charged at two different tariffs (0-6kl and 7kl +) if more than 6kl was consumed that the first 6kl was charged at R17.07 and the subsequent kilolitres were charged at R5.62 per kilolitre. The date that appeared on the bill was not a standard date (e.g. the first or last day of every month) but the date on which the meter reading was taken. Value added tax at 14% was charged on the total current amount due (for water plus sewage plus refuse removal). The total amount due was broken up into arrears at 60 days, 30 days and the current account. The account date was different to the date in which the water meter was read. Households reported that CMBs were complicated, difficult to read and should be accompanied by an information insert to promote ease of understanding.

Out of the 168 households that responded to the question of where households paid their CMBs, the majority of households (78.6%) paid at the central municipality pay point, which required transport, time (in travel and queues) and money. A small proportion of Imbali units 1 and 2 and Sobantu residents (3.6%) used local pay point offices, 15.5% of all households used municipal paypoints in the city and 2.3% of households used post office pay points. Households reported that municipal and local pay point offices had their own intrinsic problems as municipal-community communication channels (with municipal administrative officials) were difficult to access (phones unanswered, no one available to respond to queries in person, language barrier and a hostile environment), which contributed to the frustration of communities as queries or inaccuracies with CMBs were not promptly addressed. Nevertheless, despite the infrequent use of local pay point offices (in Imbali units 1 and 2 and Sobantu), households reported that local pay points should be implemented (albeit fundamentally enhanced) in all areas as local offices would ease the resources required in accessing the offices and improve payment rates. In light of the above-mentioned data, it is important to note that low-income households are often the last to benefit from municipal initiated avenues to ease payment hassles (e.g. through local supermarket chains or direct banking transfers) and have to continue using valuable resources to honour their payments.

5.3.2 Water service reporting channels

The water service reporting channels used by households to report leakages, water-related issues, or to access information were though ward committees, councillors, informed and capacitated community members or municipal authorities. The community councillor was the prime channel taken by households (through their ward committees) to report their water-related issues. However, responses were frequently delayed or absent. The preferred channel used by households (44.7%) was through local municipal authorities via telephone or direct contact. However, many households were forced to make arrangements within social circles or simply ignore the problem, as official reporting channels were generally inefficient or unavailable. It was evident that dissatisfaction existed about the current system. Community authorities generally exhibited a low level of interest, capacity or will to take issues forward and municipal authorities were approached with skepticism (by households) because of their (municipal authorities) high level of bureaucracy, inaccessibility or lack of social (customer) skills. All the above contributed to the disempowerment of households and

a poor acknowledgement by the relevant authorities of how important it was that communication channels were open and effectively maintained.

5.4 Water service delivery efficiencies and effectiveness

Water service delivery efficiencies and effectiveness were unpacked to provide a holistic summary of the level of household satisfaction towards water service delivery. Satisfaction levels of households to water service delivery were generally positive but numerous potential improvements (reported by households) were provided.

The variables of 'household satisfaction with the municipality' and 'study area' were analysed using Pearson's Chi-Square tests to determine if the satisfaction of households residing in different communities was different. It was found that there was a significant difference in household satisfaction with the municipality between different communities ($p=0.000$). Refer to table 5.6. Household satisfaction with the municipality are in ascending order: Thembalihle [42.1%], Imbali (unit 1) [50%], Imbali (unit 2) [52.9%], Haniville [87.4%] and Sobantu [88.6%]. Because the degree of satisfaction between areas was diverse, and the respondents displayed caution when answering the question, it was necessary to unpack the 'satisfaction with the municipality.' 'Satisfaction with the municipality' was attributed to the municipality not implementing broad based punitive measures for non-payment and extending water services to those households not formerly connected to the reticulation system. Satisfaction levels were therefore based on access and not service delivery efficiency. Furthermore, households displayed caution in challenging the municipality for fear that it might lead to disconnection or discrimination. The cautionary principle was adopted because of two factors: many households were not paying for their water and feared that their rights to criticise the municipality were limited and their level of participation in the water sector was poor. Household dissatisfaction with the municipality were attributed to the following: poor service quality, poor channels of communication, delays in responding to problems, old or inferior reticulation systems, delayed leakage responses, meter reading concerns, affordability constraints, inadequate arrangements or warning in cases of service disconnections (during system maintenance) and disconnections for non-payment.

Table 5.6: Household satisfaction (per study area) towards Water Service Provider (Msunduzi municipality).

Study area	Were households satisfied with the water service provider?			
	No	Yes	Total	Total number of households satisfied (%)
Imbali (unit 2)	16	18	34	52.9%
Imbali (unit 1)	23	23	46	50.0%
Haniville	11	76	87	87.4%
Sobantu	8	62	70	88.6%
Thembalihle	33	24	57	42.1%
Total	91	203	294	69.0%

Households, in the study, provided the following suggestions on how the Msunduzi municipality could improve service delivery (prioritised in descending order- refer to table 5.7): local community involvement and improved communication (28.1%); improving service delivery- non-specific (24,8%); repairing and replacement of delivery systems (11.2%); improving water affordability (8.3%); meter information, improved meter reading or monitoring technology change (7.8%); no changes required (5.8%); improving access (4.9%); in-house connections (4.9%); information and education (2.9%) and implementing a flat monthly charge (1.5%). The majority of households from Imbali (units 1 and 2) and Haniville suggested increased community involvement and communication; Sobantu reported that the water service delivery was fine and Thembalihle residents indicated improved service delivery (non-specific).

Table 5.7: Household suggestions (per study area) as to how water service delivery could be improved.

Suggestions to improve water service delivery	Study areas						Priorities (1-10)
	Imbali 1 (n=39)	Imbali 2 (n=27)	Haniville (n=66)	Sobantu (n=37)	Thembalihle (n=37)	Total (n=206)	
Local community involvement and improved communication	19	7	24	6	2	58	1
Improve service delivery	6	3	13	6	23	51	2
Repair/replace pipes and taps	8	2	2	5	6	23	3
Improved affordability	2	5	6	2	2	17	4
Meter information, improved reading or technology change	1	3	9	1	2	16	5
Water service delivery fine	0	1	1	9	1	12	6
Improved access	1	1	4	3	1	10	7
Water connection inside house	0	4	3	3	0	10	7
Information and education	0	1	3	2	0	6	9
Flat rate	2	0	1	0	0	3	10

* 1 high priority for group and 10 low priority for group

The information requested by households, in the study, was the following: all aspects of free basic water; how the water system and administrative system worked; how households could conserve water; sanitation information; how meters worked, how meters were read and how to read meters in conjunction with CMBs; affordability and payment options and how water was polluted. The majority of households reported that information was imperative for an effective water service delivery.

5.5 Summary of sub problem one

The experiences of Msunduzi low-income households to Municipal water service delivery were explored in relation to the study themes. The experiences of Msunduzi low-income households to municipal water service delivery were disconcerting. Low-income households were unable to obtain the utility of FBW as the FBW allocation did not meet basic water requirements; meters were ineffectively monitored and managed, leakages were poorly prioritised; tariffs were poorly equated which refuted cross-

subsidisation mechanisms thereby providing little respite to low-income household affordability constraints; administration channels were inaccessible and water service delivery was inefficient and ineffective. However, despite the numerous problems within the Msunduzi municipal water service delivery system, households seemed cautious and in many cases reluctant to challenge the municipality on the obvious inefficiencies. An air of powerlessness (of communities) existed owing to the feelings that the community bargaining position was lessened owing to high non-payment rates and limited platforms to engage with municipal officials and community structures. Considering the experiences of Msunduzi low-income households to municipal water service delivery, chapter six will endeavour to identify where the discrepancies in South Africa's policies, strategies and implementation lie, as it addresses the equity, accessibility, affordability, efficiency, effectiveness and sustainability of local and national water service delivery policies and strategies in servicing low-income households.

CHAPTER 6
RESULTS: NATIONAL POLICY AND STRATEGY IMPLEMENTED IN THE MSUNDUZI MUNICIPALITY

Chapter 6 addresses sub problem 2: Are local and national water service delivery policies and strategies equitable, accessible, affordable, efficient, effective and sustainable in servicing Msunduzi low-income households? This is related to the sector goals as stated in the Draft White Paper on Water Services (2002) that guarantees all people the right to access adequate and affordable potable water to meet basic domestic needs and water and sanitation services should be delivered equitably, affordably, effectively, efficiently and sustainably to satisfy sector goals. All of the prior-mentioned sector goals are systematically discussed, with the inclusion of accessibility, to provide an overview from which the research problem can be examined.

National policies and strategies are governed by the Growth, employment and redistribution strategy's (GEAR) requirement of fiscal discipline which has the implication that municipalities are forced to recover costs (in the desperate pursuit of implementing 'unfunded mandates') from all households, even those who can ill afford the full costs of service delivery (refer to section 1.1). However, municipalities are entrusted by their citizens to find amicable mechanisms for implementing national policies and strategies, and it is here that municipalities should be receptive to the needs of low-income households. It is therefore argued that municipalities are not doing enough towards the interests of low-income households and the experiences of Msunduzi low-income households (as presented in chapter 5) bears this out.

6.1 Is South Africa's water service delivery equitable for Msunduzi low-income households?

The Draft White Paper on Water Services (2002 p8, refer to section 1.8) defined equitable as 'adequate services to all people, fairly.' The research found that South Africa's water services, according to the afore-mentioned definition, were not equitable. Inequities played themselves out in every aspect of water service delivery, be it differential water service connections, affordability mechanisms, credit control policies, water restrictions, inadequate warnings for water disconnections or system maintenance, inadequate mechanisms for problem resolution and poor treatment of citizens at the hands of administrators.

A prime example of inequity was the failure to incorporate cross-subsidisation from past connections to present ones (specifically pre-1994 and post-1994 connections). Newly connected (primarily low-income) townships often had to pay additional charges on their monthly service bills to cover system connections (over and above tariff rates). Thembalihle was such a case. Thembalihle had the lowest total household income per area and per person, in the study, as indicated in table 4.4. However, Thembalihle residents paid a flat rate charge of R54.00 per month for their sewage connection in comparison to other study areas, which paid a flat rate charge of R20.75 per month. The difference was attributed to the recent implementation of a water and sewage system in Thembalihle, 1999. Such a situation, void of cross-subsidisation, ignored the substantial benefits captured by past recipients and more significantly was in breech of the Draft White Paper on Water Services, as an inequitable tariff (NGO, 2003; consistent with Hall, undated, section 2.12).

Inequities linked to the type of water system connection to low-income households were prominent. All of the study areas had in-yard yet out-of-house water connections. Such connections, although considered 'adequate' by authorities, were not equitable. Authorities argued that out-of-house connections were the only amicable option in ensuring access to basic water services (for all) and satisfying financial objectives. One could argue that the type of water system connection provided was strongly correlated to the ability of the municipality to recover revenue from the recipients. Therefore, although acknowledging the financial constraints of municipalities, it was argued that water system connections were chosen on cost-recovery principles and were not equitable with those in higher income suburbs. Furthermore, regardless of the type of water system connection (in-yard or in-house connections), the costs of water delivery were identical. Hence, low-income households, having relatively inferior in-yard water system connections compared to higher income suburbs (with in-house connections) were expected to pay the same tariffs for their water services as higher income suburbs.

6.2 Is South Africa's water service delivery accessible for Msunduzi low-income households?

'Accessible' by the researcher's definition is, "not restricted or constrained; easy to obtain by all," (see section 1.9). In the following section, access is discussed only in relation to access to the free basic water utility and not access to water per se. The

minimum core right to water, basic water requirements, significant factors relating to the basic water requirements and reference to the RDP access goals are discussed. The indigent policy and FBW policy's relationship are investigated.

6.2.1 Free basic water and water access

Access to water was confined to the 'minimum core right' and was not an 'absolute right' (Draft White Paper on Water Services, 2002 p33 section 2.2). This meant that access to water had the conditions of 'responsibility' attached to it. 'Responsibility' was interpreted as paying for the services received. If a low-income household was unable to pay for its services, then it was branded as 'irresponsible', and its rights to the 'absolute' access to water were waived and the 'minimum core right,' provided by FBW, came into effect. The 'minimum core right' may have been considered acceptable, if it met basic household water requirements; but it did not. The South African constitution guaranteed all people the right to access adequate (and affordable) potable water to meet basic domestic needs (refer to section 2.2). The Department of Water Affairs and Forestry's Vote 34 (refer to section 2.11) reference to the FBW policy as a 'further step towards the goal of access to basic water for all'; was not true, as it was not expanding access to water, as low-income households could not meet their basic water needs within its allocation.

The question, therefore, is why did the FBW policy not ensure that the FBW allocation accounted for meeting basic water requirements (consistent with section 2.13) and why did it fail to account for the realities of household size; number of dependants (consumption increases because of frequent clothing washes and hygiene practices); ill household members (specifically people living with HIV/AIDS whose hygiene goals were essential for well-being thus requiring higher water volume); flush toilets (using 9l per flush); differentiations of weekday and weekend (increased washing); more members present, visitors, washing cars- increased volumes used); and water for productive use? The suggestion by AIDC (2002) that the FBW allocation was devoid of scientific calculations was increasingly plausible, especially if we considered that it ignored the previously mentioned variables. Alternatively, could it be that the FBW allocation was just based on financial considerations? Or was it a political bargaining tool? Whatever the reason, be it uninformed decision making, the cost-recovery focus or furthering political agendas, the FBW policy did not meet the basic water

requirements. Hence, many households faced significant access and affordability constraints as a result of a policy that was purported to actually increase the accessibility to and ease the affordability of water for all South Africans.

Accessibility should be commensurate with an adequate volume of water to meet basic water requirements. The FBW allocation of 200l/household/day ignored the fact that low-income households had more than 4 members (research statistics, as presented in table 4.2, indicated that the average household had 5.4 members. In addition, the researcher put this figure closer to 8-members to account for backyard shack residents). Hence, the WHO recommendations would only be met for a 4-member household. Albeit that the WHO recommendations of 50l/person/day have already been argued as not meeting the true basic water requirements (Gleick, 1996; SAMWU, 2002; AIDC, 2002 section 2.13); nevertheless the 200l/household/day, provided by the FBW policy, did not meet WHO recommendations of 50l/person/day (Gleick, 1996; SAMWU, 2002; AIDC, 2002: or basic water requirements of 63l + per person per day, refer to section 2.13) and was even further from consumption patterns of 93.75l/person/day (calculated from municipal statistics, refer to section 5.1.3). All of this indicated that the 200l allocation per household per day provided by FBW was not sufficient to meet the basic water requirements.

The RDP stated that 25l/person/day (derived from the allocation of 200l/8-member household/day) was a provisional goal with the end goal being 50l/person/day (NGO, 2003). Noting that DWAF's implementation time line is set at 2004 (refer to section 2.13), it is uncertain whether access is likely to increase by 2004, if DWAF continues the pursuit of implementing the inadequate 6kl allocation per household per month. Access to adequate water should take into account the following: basic minimum water requirements; household demographics and household water usage patterns; household income and expenditure statuses; ability to pay; tariff structures; seasonal variation and the ease with which households can adapt to lower volume allocations e.g. the current 25kl of water per month to 6kl water per month to qualify for the FBW utility. This paper is not advocating that fixed volumetric allocations be implemented for all households by simply raising the 6kl FBW allocation. Rather, it is advocating that all factors are acknowledged and amicable policy changes are made (drawing on the low-income experience of FBW) to ensure that real accessibility mandates are achieved.

6.2.2 Indigent policy and water access

The indigent policy was based on ensuring the access of low-income households to a subsidised or lifeline basket of social services (NGO, 2003). Two fundamental problems existed with the indigent policy regarding water service access: the indigent policy did not subsidise water consumed over the 6kl allocation and it restricted water access to only 6kl, if households could not pay additional volumes (over 6kl) consumed. Noting that low-income households (included in the study) qualified as indigents (total average household income calculated at R932.17, which is less than R1378 per month limit in the indigent policy, refer to section 4.1.2) and used between 20-25kl/ household/month, it was conceivable that low-income households would not be able to access the FBW utility and would therefore be expected to pay for any water consumed over the 6kl provided. Hence, the indigent policy was based on the flawed FBW policy and perpetuated the same inadequacies.

6.3 Is South Africa's water service delivery affordable for Msunduzi low-income households?

Affordability is discussed with reference to tariffs, cross-subsidisation and credit control. Tariffs are presented as a mechanism to promote affordability and amicable cross-subsidisation. Credit control is explored in terms of how inadequate credit control measures may compromise the basic water requirements and compound low-income household affordability constraints. The efficiency and effectiveness of responding to and addressing leakages also affect the affordability of and access to adequate water.

6.3.1 Tariffs and cross-subsidisation

The tariff principles of equity, proportional use, differentiation and affordability as set out by the Draft White Paper on Water Services (paragraph 5.7.1 p37, refer to section 2.12) were not being upheld by the Msunduzi municipality (DC22). This has been verified by the experiences of Msunduzi's low-income households (refer to section 5.2.2 and expanded below). Tariffs were inequitable: the poorly equated tariff structure provided limited steps for cross-subsidisation. Low-income and low-consumption users received no differentiated concessions, as tariffs were not comparable with use: after 6kl were consumed, all households (low or high consumers) paid for their water at a fixed charge of R5.62 per kilolitre. Tariffs were not implemented according to differentiated water system connections (in-yard or in-

house). All households, regardless of water system connection, paid the same tariff for their water service. Tariffs were not affordable: low-income households struggled to pay their water bills as their water and sanitation expenditures came to the range of 8.2%-43.5% of total household incomes from R300-R1600 (the modal percentage for the average total income of R932.17 was 14.5%, see section 5.2.1). The tariff structure worked on the assumption that all low-income households were accessing the lifeline tariff provided by FBW. This was an inaccurate assumption. Low-income households consuming more than 6kl, remained firmly set in the 2nd tariff step and received no subsidisation benefits. The amended tariff structure (with the implementation of FBW) had not brought a monetary shift, rather a parameter shift (of 1kl, see figure 5.2) with the implication that cost-recovery was still being pursued from low-income households who could ill afford the tariff charges. Poorly equated tariff structures decreased cross-subsidisation options from rich to poor and industry[1] to domestic users. The Municipal water department (2003), when questioned by the researcher on the Msunduzi municipality's breech of the tariff principles, indicated that they were aware of the incongruities. However they asserted that the decision-makers in council refused to listen to their concerns. The Department of Water Affairs and Forestry, the regulator of tariffs, as stated in section 2.12, should, according to its role, use its teeth to ensure that the Msunduzi municipality amends its tariff structure.

Furthermore, because the FBW of 6kl/month was non-discriminatory, affluent small member households could be benefiting from a scheme, which was not primarily tailor-made for them. The inflexible tariff structure had in affect brought no resolution to the affordability constraints facing low-income households.

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[1] Industry in Msunduzi is charged the following tariffs: R2.95 (0-400kl), R2.76 (401-1000kl) and R2.28 (1001-no limit). (Municipal administration, 2003). It is interesting that the most industry can be charged for their water is R11 881 per month (Municipal administration, 2003). Hence no disincentives are included for high consumption; instead industry is provided concessions for high consumption. At the very least, industry tariffs should reflect the 'polluter pays' principle to promote the environmental sustainability of the resource (NGO, 2003). This is because, when industry pollutes, it is the municipality's responsibility to fit the bill for clean-up operations (NGO, 2003).

An example of the rigid tariff structure and the inadequate conceptualisation and integration of the FBW policy was that of the situation whereby households able to access the FBW utility still had to pay a flat-rate service charge for sewage services[2].

6.3.2 Credit control and affordability

If households consumed more than 6kl and were unable to pay the additional volume consumed, than a credit control policy was implemented with the implication that households were restricted to only 6kl via restriction washers. Restriction washers were mechanisms that allowed only 200 litres to be made available to households per day, thereby complying with the 6kl allocation. Restricted water supply was an unacceptable form of credit control as 6kl was not sufficient to cover the basic water requirements essential for the survival of medium-large households. Low-income households could not use less than their basic water requirement and still remain healthy. The study found no correlation between water volume consumed per person per day and average total household income for low-income households (see table 6.1). As indicated by the households in the study, households with the average total income of R300, R900, R1600, R2500, R3500 and R4500 consumed the following per person average consumption per day: 36.7, 35.3, 42.9, 35.7, 25 and 37.5 litres. The Pearson Chi-Square test analysis of monthly average total household income and average water consumption per person per day revealed that there were no significant water consumption differences between households with varying income levels (P=0.996). Hence, income levels up to or equal to a point (indicated as R4500 in the study) had no significance on the amount of water consumed per person per day. The FBW policy was therefore based on the incorrect premise that low-income households required less water than relatively higher income households. This highlighted a fundamental truth in that all households (poor or rich) required a basic minimum amount of water per day to ensure that their basic needs were satisfied. This point was frequently absent from government policy (especially the FBW policy) and departmental administration, and should be noted.

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[2] The indigent policy is to cover sewerage free of charge. However, this can only be implemented once households are registered as indigents; until such time, households continue to pay for sewage services (Msunduzi municipality indigents policy, 2002).

Table 6.1: Cross tabulation of monthly average total household income and water consumption per person per day.

Water consumed per person per day	Monthly average household income						Total
	R300	R900	R1600	R2500	R3500	R4500	
5 l	1	0	0	0	0	0	1
10 l	0	1	0	0	0	0	1
15 l	0	4	0	0	0	0	4
20 l	11	16	0	0	0	0	27
25 l	21	50	12	4	3	1	91
30 l	5	12	3	0	0	0	20
35 l	2	5	2	0	0	0	9
40 l	7	10	4	0	0	0	21
45 l	0	4	1	0	0	0	5
50 l	8	35	8	3	0	1	55
55 l	0	1	0	0	0	0	1
60 l	0	8	0	0	0	0	8
65 l	1	1	0	0	0	0	2
70 l	1	0	0	0	0	0	1
75 l	0	1	1	0	0	0	2
80 l	0	2	2	0	0	0	4
100 l	0	4	2	0	0	0	6
125 l	0	2	0	0	0	0	2
180 l	1	0	0	0	0	0	1
200 l	1	0	0	0	0	0	1
Total	59	156	35	7	3	2	262
Average total water consumption for related-average household income	36.7	35.3	42.9	35.7	25	37.5	36.5

Households should not have been discriminated against because the FBW policy allocation was inadequate. There seemed to be a deliberate manipulation of the FBW or access policy to be used as a restriction and credit control policy. The FBW policy should have ensured the free allocation met the basic water requirements and it should not have been accompanied by a restriction policy if more than 6kl of water was consumed and not paid for. Prior to the implementation of FBW, households were liable for disconnection for non-payment of water or unpaid arrears[3]. This action was neither equitable nor just[4]. The implementation of FBW allowed for at least 6kl to be accessed, even if households were unable to meet payments. If more than 6kl was used

[3] In certain instances, households were liable for the repossession of household goods or even the eviction from their houses by the municipality (Imbali units 1 and 2 and Sobantu respondents).

[4] In 2003, it was deemed illegal (except in the case of criminal tampering with the supply infrastructure) to completely disconnect households for non-payment of water services; the household may only be restricted to 6kl per month.

and not paid for, then restriction washers were implemented by the municipality to ensure that low-income households could access a small (yet inadequate for medium-larger households) amount of water (6kl) and municipalities could limit financial losses. Medium-larger households, restricted to 6kl of water through the municipal implementation of restriction washers, had their rights compromised and in this case (where the FBW policy is directly used as a credit control mechanism) the FBW policy is in breach of the constitutional right of households to access adequate water to meet basic domestic needs. If the restriction washers were removed, or if there was evidence of tampering, then the household was liable for even greater injustices delivered through the disconnection of water supplies. This was a controversial issue, as tampering was likely to occur because 6kl was not sufficient to meet basic water requirements.

It was argued by the municipal water department that the FBW allocation would only be used effectively once credit control policies were implemented. This was supported by the Draft White Paper on Water Services that stated "a consumer who does not pay for water in relation to the amount consumed has no incentive not to waste water" (Draft White Paper on Water Services, 2002, paragraph 5.7.1 p37). Hence, if a low-income household used more than 6kl and could not afford the payments (this ignored the inadequacy of the 6kl allocation and the affordability constraints faced by low-income households), then they were wasting water. If a high-income household used more than 6kl, this was expected, and because the rich could afford it, it was not considered as wastage but valuable in recovering much needed revenue. Ultimately, the well being of households should be given preference and other cost recovery avenues investigated.

6.3.3 Leakages: affordability, efficiency and effectiveness

The Draft White Paper on Water Services (2002, paragraph 6.3 p46) stated that 'water service authorities should consider providing assistance for the repair of plumbing fittings as this is a cost-effective intervention in reducing water service costs to both consumers and the water service provider' (refer to section 2.14). As depicted in figure 5.1, the municipality's responsibility ended at the household meter. Noting that contractors connected the fittings from the meter to the tap, and that monitoring of contractors was poor (reported by households and Msunduzi NGO, 2003), it is critical that such a service exists. The City Engineers (2003) acknowledged these problems. However, they stated that they were limited by budgetary constraints; hence, the Msunduzi municipality did not apply their lateral thinking to the systematic and cost-

benefit approach of pressure management, technical innovation, and the development of management information systems (refer to section 2.16). The development of management information systems, identified by the Draft White Paper on Water Services (2002), were not adequately implemented by the Msunduzi municipality and the current system was not consistent with the 'proactive approach' asserted in section 2.14. The Msunduzi municipality had initiated a toll free line for reporting leakages and complaints. However, this initiative was constrained by limited finances, human resources and innovative systems. Until an effective water demand management plan is implemented, households will continue receiving inflated water bills and in the case of inability to pay, the municipality will continue recouping losses for unaccounted for water through the transfer of the financial burden to households through increasing tariffs which will still not be able to be paid.

6.4 Is South Africa's water service delivery efficient and effective for Msunduzi low-income households?

As stated in section 1.9, 'efficient' is defined as the job being well done and physically reaches all people and 'effective' is defined as resources not being wasted (Draft White Paper on Water Services, 2002 p8). The majority of households (98.4%), in the study, had on site taps (refer to section 4.1.3) and free basic water had a 100% coverage rate (assuming 100% coverage of 98.4% of households having on-site taps). One would therefore deem that the Msunduzi municipality had reached a high level of efficiency. However, the majority of households had major problems with the inability to pay their consolidated municipal bills and were not accessing the FBW utility. Furthermore, regarding the effectiveness of water service delivery in relation to the aforementioned section 6.3.3, one would find it very difficult to affirm that water resources are not being wasted. One would therefore argue that the Msunduzi municipality is neither efficient nor effective. However, the efficiency and effectiveness of South Africa's water service delivery was primarily investigated by considering the new role of local government provided by the decentralisation of the Department of Water Affairs and Forestry. Cooperation between and within departments was also considered as a critical aspect of efficient and effective water service delivery.

The Department of Water Affairs and Forestry (DWAF) is undergoing a period of decentralisation. DWAF will remain 'a regulator, a policy maker and a supporter' but

all other national responsibilities will be transferred to local government (Draft White Paper on Water Services, 2002, paragraph 4.22 p15). This provides local government (municipalities) with numerous challenges in that their capacity will have to be substantially increased if they are to take on their new roles efficiently. Furthermore, a worrying aspect is that if local government is not ready for their new role, the private sector may grasp the opportunity to be water service providers and may be the preferred option considered by municipalities. This is in contradiction of the capacity building and local governance principles motivating the decentralisation objectives. Furthermore, it raises concern because 42% of DWAF's budget is allocated for private consultants (DWAF Vote 34, 2003 p821). If DWAF does not have the capacity then the probability of local government having the capacity is poor. Decentralisation of water services to local governments comes at a time when municipalities are expected to do more with less and do better with what they have. With the changing policy environment, it can be said that decentralisation is being implemented with undue haste, as many municipalities do not yet have their 'house in order' and are still struggling to achieve water delivery goals even with the full support of DWAF.

There were significant cooperation challenges faced within the local Msunduzi municipality's administration, treasury, engineering and water departments. It was attributed, as described by the municipal water department (personal communication, 2003), as a 'silo-effect' whereby different departments did not communicate with one another and had a conflict of interests. This frequently resulted in projects not being provided sufficient financing, political backing or social prioritisation, which culminated in inefficiencies and uninformed decisions. Furthermore, the municipal water department and city engineers stated that there was substantial political interference in budgetary allocation and the prioritisation of water issues. There were communication barriers within decision-making forums, whereby the recommendations of diverse departments seldom were synthesised into integrated strategies (City Engineers, 2003). This resulted in the municipal council ('rubberstampers') taking decisions from uninformed positions and ignoring critical aspects, which ultimately meant that adopted strategies were neither holistic nor efficient.

6.5 Is South Africa's water service delivery sustainable?

The financing of South Africa's water service delivery was primarily based on 'user fees' or cost-recovery from users for services received. Such a system should have been accompanied by well-placed subsidies if it was to be sustainable. Currently, subsidisation mechanisms provided by tariffs, the FBW policy and indigent policy are ineffective, which provides significant challenges for cost-recovery owing to the fact that the majority of low-income Msunduzi residents and South Africans are unable to pay the expected full cost of water services. The Draft White Paper on Water Services (2002) stated that tariffs should promote financial and environmental sustainability. The definition of financial sustainability was the following: subject to explicit external subsidies, tariffs should at least recover full capital costs in addition to operating and maintenance (Draft White Paper on Water Services, 2002, paragraph 5.7.1 p37). Hence, financial sustainability was based on subsidies and cost recovery. The problem with cost recovery arose when cross-subsidisation through tariff structures was poorly equated. The irony is that when tariffs are poorly equated, water is even less affordable which translates to low levels of cost recovery, which once again turns full cycle to the increase of tariffs.

6.5.1 Financial sustainability

The financing of FBW was based on the equitable share, user fees and cross-subsidisation. The equitable share was a non-conditional grant, calculated on a basket of basic services (based on census data) for targeted poverty relief allocated on the population served by 284 municipalities (NGO, 2003). It was sourced directly from the division of revenue act through the national fiscus and its annual amount increased or decreased annually depending on the pressure put on the national treasury for tax relief (refer to section 2.10). Because the equity share was a non-conditional grant, national government could not dictate its use, but could merely recommend its use (Draft White Paper on Water Services, 2002, paragraph 5.6.3. p35). Municipalities were therefore able to decide on its application, which may or may not have been allocated to financing water services (refer to section 2.10). Furthermore, the regulation of the equitable share's use was poor and there were no mechanisms to ensure that it was allocated to water provision. The Msunduzi tariff structure did not allow sufficient scope for cross-subsidisation leaving the financing largely up to the equitable share (non-conditional grant) and user fees (which were dependant on high payment rates). The financial

sustainability of FBW was severely compromised by the reliance on the poorly regulated and fluctuating equitable share. Low-income households, which consumed more than the FBW allocation of 6kl, were unable to access the benefits of the equitable share and the poorly equated tariff structure provided no cross-subsidisation resulting in their expectation to pay the full cost for their water provision. A question, reliant on obtaining Msunduzi municipal statistics on how many low-income households are accessing the FBW utility, is if the FBW utility is not being accessed by the majority of low-income households (as this research suggests), then where is the Equity Share going to?

6.5.2 Environmental sustainability

The Draft White Paper on Water Services (2002, paragraph 5.7.1 p37) stated, "environmental sustainability can be promoted by ensuring that external environmental costs are internalised into the tariff structure". A 'rising block' or stepped tariff structure discouraged excessive use of water and reflected the marginal cost of expanding supply capacity (Draft White Paper on Water Services, 2002, paragraph 5.7.1 p37). The findings from the research indicated that environmental sustainability via a limited 'rising tariff structure' was not adequate in promoting the conservation of water nor was it adequate in providing for cross-subsidisation of the resource. The tariff structure in Msunduzi was in contradiction with environmental sustainability: Msunduzi had insufficient 'rising block tariffs' (only two blocks: flat rate of R17, 07 for first 6kl and R5.62 per additional kilolitre used, regardless of household volumetric consumption). This had the implication that low-income households, not accessing the FBW utility, paid the same tariff for their water as high consumers and high consumers had little incentive to save water (as there was no steep increase in tariffs after the original 7kl tariff of R5.62). Moreover, industry in Msunduzi was charged at descending tariff rates; hence, the more water they used, the less they paid per kilolitre (R2.95 [0-400kl], R2.76 [401-1000kl] and R2.28 [1001-no limit], see 6.3.1) thereby receiving no incentives to conserve or recycle their industrial water used. Low-income household monthly water and arrears payments became insurmountable owing to very real affordability constraints, which rendered water usage and economic cost linkages useless (because households never expected to ever finish paying their water arrears which were beginning to look like mortgages). The inability to pay coupled with unrestricted water usage (no credit controls implemented as yet) had serious

implications for the sustainability of the water resource. Household conservation of water was limited to personal water consumption restriction. However, it was noted that the majority of households requested water conservation information therefore, it could be assumed that water was not entirely without financial or environmental value (the social value was noted as high, see section 5.1.1). Moreover, household meters were not utilised as water consumption monitoring tools thereby negating an important conservation tool. However, the blame could not be solely aimed at low-income households as the municipality had underestimated its value for household water demand management.

6.6 Summary of sub problem two

Chapter six highlighted that local and national water service delivery policies and strategies and the implementation of policy and strategies were neither equitable, accessible, affordable, efficient, effective nor sustainable for Msunduzi low-income households. The majority of inconsistencies existed at the implementation level (poor or inadequate regulation, tariff setting and water demand management). However, in certain cases it was the policy and strategy that was at fault due to its reliance on cost-recovery principles, inadequate lifeline allocation and poor integration of related variables. Many of these problems existed because the regulation at national level was not implemented properly which allowed for many irregularities to go unnoticed e.g. the inequitable connection costs as was evident in Thembalihle and the poorly equated block tariffs (in Msunduzi Municipality). Clear and informed policies and strategies should have incorporated integrated approaches with a clear cognisance of the constraints faced by low-income households and a solid public participation foundation. Chapter seven addresses policy, strategy and implementation shortcomings and suggests reforms to enhance policy and ensure that implementation mechanisms are in line with policy and strategies.

CHAPTER 7
RESULTS: REFORMS TO POLICIES AND STRATEGIES

Chapter seven addresses sub problem 3: what reforms can be made to national and local water service delivery policies and strategies to ensure equitable, accessible, affordable, efficient, effective and sustainable water service delivery to low-income households? The variables of equity, accessibility, affordability, efficiency, effectiveness and sustainability are not presented in isolation; rather water service delivery contraventions, inconsistencies or inadequacies are approached directly. This approach is taken as many of the variables are crosscutting and can be applied to all or some of the policies, strategies or water service delivery issues. In conjunction with the above-mentioned variables, the following issues will be discussed: free basic water policy and implementation strategies, low-income household affordability constraints, affordability mechanisms, credit control policies, monitoring mechanisms and water demand management, administration and financial mobilisation. Reforms are suggested through the vehicle of reviews, evaluations and audits to make informed amendments and adjustments in policies, strategies and regulation and monitoring mechanisms.

7.1 Free basic water policy and implementation strategies

Free basic water (FBW), as described in this study, has been synonymous with access to the FBW utility (refer to section 2.13). This is a limited description and negates the broader situation whereby certain households do not have access to water (let alone access to FBW). However, for the purposes of the debate, access is described here by the narrow definition as 'the access to the FBW utility.' A national FBW evaluation should be implemented to clarify the accessibility of the FBW utility. The basic water requirements for health, well-being and satisfying productive, sustainable livelihoods should be scientifically and socially assessed. A parallel process should be implemented to create platforms whereby the experience of low-income households to FBW could be showcased. The outcomes of the evaluation, basic water requirements and low-income experiences to FBW should be integrated and used to adjust the FBW policy for the achievement of the Department of Water Affairs and Forestry's (DWAF) accessibility mandate. The amended policy should incorporate the factors affecting consumption (household size, number of dependants, ill household members, flush toilets, differentiations of weekday and weekend, seasonal variation, rural/urban

location, water for productive use and socio-economic situations) and adopt a diverse and integrated approach. As is the case of the Msunduzi municipality, the FBW policy's implementation is only phase one. Such amendments should be built into policy evaluations and inform future implementation plans/phases.

The implications of the process provided above are that the amended FBW policy will be more accessible and acceptable to low-income households. The main objective of the FBW amendments should be to ensure that the spirit of the FBW policy is upheld, that is of increasing access to water for all (as per the Draft White Paper on Water Services, 2002; Bill of Human Rights, 1996 and National Water Act 36, 1998), not simply expanding the number of municipalities implementing the FBW policy (there is no correlation between municipalities implementing the FBW policy and the numbers of people accessing the FBW utility). In addition, the free basic sanitation policy should be integrated with the amended FBW policy. Monitoring systems and criteria should be implemented by DWAF to verify if FBW and free basic sanitation efforts are meeting accessibility targets and policy objectives.

The access to the FBW utility is determined by household consumption patterns and needs (can they or can they not limit themselves to only 6kl); and the access to water (over and above the 6kl) is determined by affordability constraints and the severity of credit controls. Hence, if households require more than 6kl for their basic water requirements, which is plausible especially for medium-large households, affordability constraints mean that households will either have to use their limited income to pay for additional volumes consumed or restrict their water consumption to 6kl (implications for health) or consider alternatives to their household supply. It is therefore necessary to unpack the affordability constraints faced by low-income households so as to provide suggestions to ensure that households are able to access the basic water requirements for their survival.

7.2 Low-income household affordability constraints

There should be a national review of the affordability constraints facing low-income households. This is consistent with the White Paper on National Water Policy for South Africa (1997), which states that government should move systematically to achieve realistic water pricing within a reasonable time frame. The 'realistic water pricing' as

addressed by the White Paper on National Water Policy for South Africa (1997) should be implemented by amending current expected water and sanitation expenditures to within reasonable charges and realigning these charges with the percentage of average total household income low-income households were willing and able to pay towards their monthly water and sanitation expenses (see table 5.4), with the socially acceptable tariff rates of 3-7% (as cited by Pauw, 2003, in section 2.12). See table 7.1.

Table 7.1: Potential affordability and total price alignment of water and sanitation services.

Average total household income	Amount households were expected to pay	Amounts households were willing and able to pay	Socially acceptable tariffs (5% mean)	Socially acceptable tariffs (7% maximum)
R932.17	R130.55 (14%)	R25.03 (2.69%)	R46.60 (5%)	R65.25 (7%)

Table 7.1 indicates the complexity of realigning expected payments with willingness and ability and socially acceptable tariff percentages. However, it is the researcher's opinion that two variables could simplify the alignment: firstly, the amount households were expected to pay is too high (tariffs poorly equated and inequity within the water delivery system) and secondly, the amounts households were willing and able to pay to secure water services were understated (such is human nature). Hence, it is the researcher's opinion that if water and sanitation services were priced giving special consideration to income and service expenditures of low-income households, household size, number of dependants and people living with HIV/AIDS, then the socially acceptable tariff (range of 3-7%) would be obtainable. Moreover, service expenditures for low-income households should be decreased if government is to fulfil its affordability and accessibility mandate. This can be achieved through equitable tariff structures that allow for sufficient cross-subsidisation measures. Cross-subsidisation should be crosscutting and be utilised across services and not simply services in isolation (hence not ring fenced).

Further mechanisms to promote affordability (as suggested by households), could include the following: removing vat on basic service expenditures (following the same vein as VAT-free basic food stuffs e.g. brown bread and mealie meal); and scrapping arrears on basic service expenditures, providing for a fresh start. Scrapping arrears could be a valuable tool in promoting the payment of services as mounting debt causes a

powerlessness to ever finish paying off debts and mitigates against future payments. Skills programmes, as stated by households, on household budgetary management could be valuable in assisting households to budget correctly. The low-income households' willingness and ability to pay should be elicited to ensure that pricing policies are acceptable (price and service quality relationship) and affordable to low-income households. The social acceptance of service expenditure costs by low-income households is critical.

The socio-economic constraints facing low-income households can be addressed through properly equated tariff structures and policies that specifically address the needs and circumstances of low-income households. Mechanisms are available for this purpose e.g. cross-subsidisation, tax-based approaches, indigent policies and solidarity charges (see section 2.12). Currently, however, affordability constraints reduce access to essential services whilst putting the health, well being and sustainability of households in jeopardy. Affordability should be reviewed and pricing and cross-subsidisation policies should be reviewed, adapted and expanded to be truly receptive and valuable to low-income households.

7.3 Affordability mechanisms

Amended tariff structures and the indigent policy, if correctly equated, could promote the affordability of water delivery services for low-income households. The Msunduzi tariff structures suggested that tariffs were neither affordable nor equitable to Msunduzi low-income households. A national review of tariff structures should be initiated as poorly equated tariff structures, as evidenced in Msunduzi, are not unique to Msunduzi municipality. Many municipalities have similar irregularities and these should be investigated. Progressive redistributive tariffs should be implemented to promote cross-subsidisation and conservation incentives. Stronger regulation mechanisms should be implemented by DWAF to ensure that the tariff principles, as stated in the Draft White Paper on Water Services, are upheld. The indigent policy may be valuable in increasing the accessibility and affordability of water and other basic services. However, its value should be reviewed and the low-income socio-economic constraints should be factored into the amended policy e.g. household size, number of dependants, illness status, household water activities, income and expenditures. Thereafter, the indigent policy should be fast-tracked and all qualifying households should be assisted in registering for

the subsidy. This could be administratively possible through employing more staff to achieve this purpose. The indigent policy's relationship with the FBW policy should be reviewed and the scope of the indigent policy should be expanded to ensure that no households/persons, genuinely qualifying for such a policy, slip through the net.

7.3.1 Tariff structures

There should be a national review of municipal tariff structures to assess if the tariff principles, as stated in the Draft White Paper for Water Services, are endorsed. The Msunduzi municipal tariff structures suggested that the tariff principles were not being satisfied. The Msunduzi tariff structure (for domestic users) had two blocks: the 1st block (6kl) was charged at R17, 07 and the 2nd block (7kl+) was charged at R5, 62 per kilolitre (figures provided by Treasury and Water department, 2003, refer to figure 5.2). The Msunduzi tariff structure, for industrial consumers, had the following blocks: R2.95 [0-400kl], R2.76 [401-1000kl] and R2.28 [1001kl-no limit], refer to section 6.3.1. Such a tariff structure provided industry with concessions for high water consumption. The Msunduzi municipal tariff structures should be adapted to ensure that social and environmental imperatives are addressed before economic considerations and that high volume consumers cross-subsidise low volume users (which is not currently the case). Amended tariff structures should take into account all associated low-income household service expenditures (electricity, rates, rent, food, school fees, transport and medical expenses), willingness and ability to pay[1], social justice, environmental sustainability considerations and social acceptance indicators to ensure that the final tariff structure is affordable and acceptable to low-income households. The following suggestion is provided: 1st block, amended FBW (equated by considering basic water requirements and all associated factors); 2nd block (upper limit 25kl), lifeline tariff; 3rd and 4th block to account for high volume consumption. The FBW allocation should be calculated at zero cost to the citizen, the lifeline tariff should be calculated at an affordable rate and the 3rd and 4th block be calculated at an economic rate. Only if the citizen falls into the 3rd or 4th tariff – hence high volume users, higher than the amended FBW and lifeline tariff, should they pay the FBW tariff. The 3rd and 4th block should be much higher than the 2nd block to provide incentives for the wise use of water and provide for large cross-subsidisation opportunities. The progressive redistributive tariff system should meet

[1] It is essential that tariff rates correspond with the 'willingness and ability to pay' of low-income households if payment rates are to be socially acceptable and the rates of payment, by households, are to increase.

equity and affordability objectives, whilst promoting the sound use of the resource (conservation and money-saving incentives for all consumers) and ensuring amicable cross-subsidisation from high to low volume users. Such a system emphasises the importance of the accurate calculation of the FBW allocation and suggested lifeline allocation. DWAF should enforce tougher regulation of tariffs and should not just suggest tariff recommendations. Equity should prevail and the tariff principles should be upheld.

7.3.2 Indigent policy

As indicated in table 4.4, the total average income for all study areas (R932.17) suggested that the average household, in the study, qualified as an indigent household (earning less than R1378 per household per month, see 2.14). Despite the indication that most low-income households would fall in the indigent category and receive certain benefits (albeit limited), the indigent policy should be reviewed to ascertain if it acknowledges the special socio-economic constraints of all low-income households to ensure that no justified qualifying households fall through the system. All factors should be considered e.g. the number of household members, number of dependants, income and basic service expenditures, people living with HIV/AIDS and dependency on social grants. As it stands, the indigent policy benchmark provides a fixed amount per household and does not take into account the factors mentioned above. All variables should be included in determining which households qualify for the indigent policy and how much should be allocated per capita in that household. This could be achieved through providing each variable a social ranking and matching this with an equivalent concession (denoted as an increase in the benefits). Hence, the beneficiaries of such a system would therefore receive varying degrees of assistance, which should make a difference to livelihoods and not simply be a respite to numerous survival-challenges. The indigent policy should than be fast-tracked and all households classified as indigents should be assisted in registering for the grant, as it is a policy that should have a significant effect on the well-being of low-income households. Administrative assistance should be achieved by increasing staff numbers in administrative centres, employing field-workers to provide 'house-to-house' assistance or by organising community meetings where indigent policy procedures can be discussed and the relevant information and forms disseminated. The indigent policy and FBW policy relationship should be reviewed. Assuming no change in the FBW

limit, the indigent policy should cover additional water consumed above the inadequate 6kl allocation. Indigent households should not face water restrictions if they consume more than the insufficient FBW allocation. Credit control mechanisms, however, could be applied if households use more than the suggested 2nd block of 25kl (see 7.3.1) after considering household size and water usage activities, but they should not undermine the financial constraints faced by low-income households classified as indigents.

Because affordability mechanisms are not yet receptive to the socio-economic constraints of low-income households, credit control policies can undermine the socio-rights of low-income households. Affordability mechanisms, amicably equated and implemented, should be seen as synonymous with promoting human right imperatives i.e. dignity. There is a place for credit control policies in the case of the disregard or misuse of services. However, if credit control policies are utilised to erode the access to basic services, based on inability to pay, than they are unacceptable and should be amended.

7.4 Credit control policies

Credit controls are a direct result of full-cost recovery policies. Municipalities, having few financial options available to them (as a result of inadequate national to local transfers and poorly structured tariff blocks), are unable to cross-subsidise their large low-income sector bases. Credit control policies are therefore a desperate mechanism, implemented by municipalities, to recover costs from users. The problem with such policies is that they neglect to take into account the socio-economic constraints of their consumers. Hence, a financial and administrative decision is taken without considering the affordability constraints of low-income households and seldom reaches the expected cost recovery levels. Credit control policies should consider the social implications of such a policy. Hence, policies should reflect the constraints of low-income households and implement amicable and acceptable policies. Credit control policies often contravene constitutional rights. Such was the case of disconnecting household water supplies because of an inability to pay (refer to 2.14). Credit control policies allowing for the restriction of water supply below the basic water requirements, repossession of movable property or eviction from houses for inability to pay for basic services is unacceptable (refer to 2.14). Nevertheless, municipalities are entitled to implement credit control policies. However, they should follow constitutional rights, national

guidelines and ensure that the socio-economic well being of households is upheld. Monitoring and regulatory powers of national government should be increased and municipalities in breach of fundamental socio-rights should face punitive measures.

7.5 Monitoring mechanisms and water demand management

There should be a national audit reviewing the type, utilisation, value, cost and acceptance of meters and their value in terms of cost-benefit to municipalities and households. Information should be distributed (with some urgency) by municipalities to households to promote the use of meters as a household monitoring tool. Leakages pose a significant sustainability and affordability problem as most households in the study (77.1%), experience leakages after the meter position (see table 5.1). A national household water audit[2] and household water demand management plan should be implemented to limit the environmental and financial loss of the resource. Information management systems should be implemented to ensure that leakages are promptly reported and addressed (as suggested in the Draft White Paper on Water Services, 2002, refer to section 2.16). 'Community water leaks projects' are suggested as a mechanism whereby communities can acquire skills and tackle the problem, while having the support of municipal technical resources and finances. Financing options, identified through the Municipal Income Grant, could be used to address leakages, upgrades and maintenance issues (see section 2.10). Monitoring mechanisms through regulation and standards are suggested to ensure quality workmanship and water system installation and maintenance.

7.5.1 Meters

There should be a national audit on the type, utilisation, value, cost and social acceptance of meters. Msunduzi municipality has implemented such a meter audit; however the results of the audit are still pending. Should the results of the audit show that meters are an acceptable monitoring mechanism and show a favourable cost-benefit to municipalities and households then the following should be implemented (based on the experiences of the households included in the study): information should be distributed to households on how meters function, how households can utilise meters as

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[2] The results of the Msunduzi water leaks audit were unavailable; however (on its availability) such data should be analysed and the amount of water being lost per day (unaccounted for water) should be linked to the economic and environmental costs to low-income households and the Msunduzi municipality.

a household consumption monitoring mechanism and how to use the information from the meter readings in conjunction with municipal consolidated bills. This would transfer monitoring control to the households. In addition, municipal consolidated bills should be reformatted and simplified to ensure understanding. Information on how to read the reformatted municipal consolidated bills should be distributed to promote ease of use. The type and form of information could be similar to that distributed via local newspaper attachments as initiated by the Water Action Campaign (from this research, see appendix G). Furthermore, the date that the municipal meter reading took place should be consistent with the meter reading date appearing on the municipal consolidated bill. This would assist households in monitoring their meters in conjunction with the municipal consolidated bills and allow households to query any irregularities. Households should also be encouraged to enter the monthly meter readings into their own household logbooks as a triangulation mechanism.

In the cases of accessing the FBW utility, the receipt of municipal consolidated bills should be terminated thereby reducing administrative costs. Systems could be implemented that only show up if more than the FBW allocation is utilised. The current Msunduzi municipality connection policy of moving meters outside the yard, for easy meter reading access by the municipal meter readers, may be advantageous in ensuring meter reading consistency; however it sends a strong message that meters are for administrative use only and ignores the value of individual household self-monitoring of water consumption. This incorrect message should be remedied on the outcomes of the review and the dissemination of household meter reading information (as described above).

Another option in the meter discourse is of implementing bulk meters instead of individual household meters. Why does council continue implementing household meters if the possibility exists that meter readers do not read them accurately (are poorly trained or unable to access the meters) and households cannot use them as a monitoring tool owing to lack of information? Are bulk meters (that service 50 households) not a better option (SAMWU, 2003)? Costs in implementation are relevant because bulk meters would save money (installation costs R1000 versus R300*50 = R15 000 (including service charges); administration and meter reader costs, time and achievement of the same goal (possibly more accurately as meter readers could read

fewer meters and read them consistently as time constraints would be lessened; hence reading 1 bulk meter versus 50 individual household meters). Bulk meters offer a considerable saving; however, individual self-monitoring would be negated (but, as it is, self-monitoring is not really common practice because of a lack of understanding), as all 50 households would split the consumption costs equally. Nevertheless, if meters are estimated or not accurately or consistently read then bulk metering could save the Msunduzi municipality some monies. The opinion of the researcher is that if the current technology is pursued than it must be supported by efficient computer technology, consumer information and social acceptance.

7.5.2 Leakages

A comprehensive national household water leakage audit should be implemented. The audit should elicit how much water is being lost per household per day and the monetary values lost to municipalities in real costs. Water saving scenarios should be implemented in terms of the cost-benefit of implementing water demand management policies which examines actual water consumption in areas, water losses, monies lost over one month, one year and five years; and includes the population served, population growth, and the implication of all the factors on water-serviced resource expansion and municipal and national government finances.

A comprehensive national and local household water demand management policy should be implemented. The water demand management policy should cover all water systems, including meter to tap leakages. Political will and sufficient financial resources should support the policy. Through the policy, an information management system should be implemented whereby technical equipment can pinpoint where and when leakages are occurring. A technical team will then have to synthesise the data and mobilise a leakage management team to address the leakages promptly. A reporting system, whereby households can report the leakages directly to the technical team, should act as a parallel system to that mentioned above. The water demand management policy could assist in creating the space whereby 'community water leaks projects[3]' could be initiated. 'Community water leaks projects' should work closely with the technical team until all leakage responses and leakage monitoring could be

[3] Such a water leaks project was implemented in Gugulethu, Western Cape, by the City of Cape Town, and achieved a high success rate.

referred to them. Hence, the project staff members should undergo a period of training and practical experience (working closely with the technical team) until they could manage the project by themselves. The municipality should support the project with finance and technical assistance. The project should still receive information (on the location of leakages) through the technical team and improved reporting systems. Ultimately, the specific communities should own and manage the project. The project staff members should also be trained in implementing environmental audits whereby they can assist households in identifying water losses as well as ways to conserve water (NGO, 2002).

An encompassing water leakage policy supported by a nationwide water audit would provide insight into the current Msunduzi and national water leakage problem. Numerous possibilities do exist to the leakage challenge e.g. increased monitoring, regulation, quality control and accountability of contractors; proper pressure management (during 12-4am to decrease water losses); improved leakage management; fast-track leakage response (arrangements made for municipal and community leakage management capacity/ community affordability constraints); community plumbers; and information (Msunduzi city engineers, 2003). However, political will for higher prioritisation and sufficient financing for water leakage projects must support options.

Financing such a policy and water leakage projects should be mobilised through the Municipal Income Grant for infrastructure (leakage) upgrades and maintenance. Additional urgent issues that should be addressed include the upgrading of old water systems (especially in older townships) and regulating and monitoring municipal contracts. Standards and regulations should be explicit for all activities and construction, and monitoring systems should be implemented.

7.6 Administration

An effective water service delivery framework is reliant on an efficient and effective administrative system. Municipal administrative systems should be enhanced through the development of an effective and diversified technical and personnel base. The systems should be easily accessible and receptive to the population served. Platforms should be enhanced to ensure active participation and control by all role players. DWAF should ensure that municipalities are ready and capacitated for their new roles.

Municipal plans should be implemented to promote popular administration and information should be accessible to ensure informed decision-making. Political space should be accessible to all role players. Service delivery should not be manipulated as a political tool to further the agendas of certain political objectives at the expense of the people. Community structures should be capacitated, apolitical and their powers should be adapted to ensure that certain responsibilities are transferred to community service offices.

7.6.1 Municipal administration

Efficient and effective administrative systems are imperative for an effective water service delivery framework. The administrative and technical personnel and the capacity of personnel should be increased. Human resources should be diversified and the technical systems necessary for efficient and effective systems should be increased. Administrative staff frequently complain that they are doing the best they can with outdated technical equipment and shortage of support staff- this should be promptly and adequately addressed (Msunduzi administration, 2003). Information management systems should be effectively implemented (Draft White Paper on Water Services, 2002). Databases should be accessible, transparent and efficient. Administrative systems should be easily accessible (available, sufficiently staffed and speak the language of the consumer) and provide a satisfactory level of service. Municipal systems should be assessed in light of the current decentralisation of DWAF. Municipalities should be assisted to ensure that they are ready and capable to take on their new roles.

Platforms and communication channels between and within members of parliament, departments, councillors, ward committees and communities should be improved. Decisions should be made on apolitical, informed and integrated grounds. Diverse departments should strive to fulfil common objectives. Capacity within councillors, ward committees and communities should be enhanced through aggressive training, engagement with the many social issues they face and a strong supportive resource network. Councillors and ward committees should attend all community task team meetings (it has been voiced by study participants that councillors and ward committees often fail to attend community meetings). Community structures should be enhanced to ensure an apolitical platform on which community voices are heard.

Information on water systems management and municipal structures should be available and accessible to all to promote engagement with decision-making structures. Popular involvement should be increased and extended to all aspects of water service delivery e.g. budget prioritisation by communities (refer to section 2.15). Central to popular involvement is the right to access information for the exercise or protection of rights (Constitution of the Republic of South Africa, 1996: section 32.1), which should be upheld and available to all, without restriction. Municipal plans for such a popular administration should be implemented.

7.6.2 Political platforms

Communication channels are essential to a democratic decision-making body. All lines of communication should be enhanced and the capacity of all stakeholders to engage in fundamental issues should be improved. This study has revealed fundamental problems concerning the 'top-down approach' system of municipal decision-making; whether community representatives really represent their communities; and if they have the capacity and political space to do so. Platforms for information and experience sharing should be created to ensure that the experience from the ground is incorporated into formal and informed decision making processes and not solely rely on community representatives to speak on the communities' behalf. The political space should be provided for all stakeholders to engage and control the process.

Municipal and council decision-makers should have the mandate to take issues forward through political will, capacity and financial backing. These communication channels should extend to input into local issues, strategy and policy and hence from a local to a national level. The ANC's emphasis on 'a better life for all' is embedded in improving service delivery. Service delivery has become a political issue; it is what the ANC government will be judged on. As with all political issues, services can be manipulated to serve a political purpose, at the expense of the people.

As indicated by the households included in the study, community structures are problematic in terms of reporting systems (refer to section 5.3.2). Frequently the councillor and ward committee positions are dogged by political imperatives. Hence, a citizen of a specific political affiliation will have a greater chance of getting an issue addressed if he/she holds the same political affiliation as the councillor or ward

committee. In the case of holding a different political affiliation to those in the community structure, citizens become frustrated and problems persist. This reason alone should be enough to push for an effective and apolitical structure to address specific issues. The councillors and ward committees should not be the channel used to report water issues; rather community pay points and reporting offices should be established in all areas to meet this role. The role of councillors and ward committees should shift slightly whereby they can address popular service related issues yet still monitor service quality effectiveness and follow-up issues not adequately resolved. Their time will be freed-up to address broader issues and attend specific information workshops so as to assist their communities more effectively.

Households indicated that community structure roles and positions should be re-evaluated and new tasks allocated to support different systems. Furthermore, it may be necessary to assess the current political problems within community structures and source recommendations to improve community systems and promote service delivery which is removed from political agendas e.g. the election of community structures on an apolitical basis, and a councillor should not be an ANC councillor but rather an Imbali or a Sobantu councillor with no political affiliation. Such a policy would ensure that all issues would be adequately addressed and not simply addressed because it would forward the specific political interests of the specific councillor.

As per the above suggestions to reform the water service delivery communication channels, community service offices should be provided as a possible resolution to political manoeuvring. Municipalities should support community service offices. However, local community members should hold positions with no political agendas. The community service offices should be adequately outfitted, responsive and be staffed by competent staff who are able to address and resolve issues promptly. Such a community office should hold staff members with special water-related training and the structures and systems (computer and administration) involved in addressing problems would be well known to the staff members. This implementation will build capacity within the particular community and promote efficiency and effectiveness in water service delivery. Furthermore, community service offices should be integrated to address numerous service delivery issues e.g. electricity, waste, sewage, road/traffic issues, transport, indigent and social grant assistance. From the results of the study,

such community service offices should be kept busy full-time (by a steady flow of complaints, queries and information requests) and should be invaluable in improving service delivery.

7.7 Financial mobilisation

Financial considerations are at the loci of all water service delivery decisions. Finances should be mobilised to ensure that water delivery is equitable, affordable, accessible, efficient, effective and sustainable. National to local government transfers should be increased to ensure that municipalities are able to implement 'funded mandates' of accessibility, affordability, equity and sustainability. Private sector options should not be considered until public sector ones have been thoroughly investigated.

The equity share, a primary funding mechanism for FBW, should be increased to cover the full costs of providing an amended FBW allocation. This increase would assist in removing the focus of its cost recovery through user-charges from this socio-economic level. The equitable share allocation should be increased and this figure should be equated by taking into account all relevant databases and studies. The equitable share should be stabilised (hence not reliant on the fiscus) and a fixed amount should be allocated annually. Furthermore, the equitable share should be changed to a conditional grant; hence, municipalities should be forced to allocate it to specific services and should not be allowed to use it as they see fit. This should ensure that it is utilised for its specific purpose/s. Municipalities should be accountable for its allocation and should be closely regulated and face punitive measures if it is misused. The allocation and use of grants should be annually audited and monitoring mechanisms should be implemented.

Financial departments should ensure that public finance be mobilised to cover capital investments and social protection where users cannot afford the full costs of the necessary water and sanitation programmes, therefore ensuring equity of access (Hall, date unknown). The reliance on cost-recovery should be shifted upwards on the understanding that many sectors of society simply cannot afford the full costs of service delivery. References to full cost-recovery should be limited to economic sectors or high-income users who can actually afford all costs, thereafter cost-recovery should be seen in terms of the equity share, funded mandates and cross-subsidisation. The

mobilisation of grants, equitable cross-subsidisation and amicable tariff structures are important to ensure accessibility, affordability, equity and sustainability.

Financial mobilisation is determined by economic policies. The current national paradigm is influenced by the global paradigm of fiscal discipline and the recovery of costs. This has prompted a shift from public sector options to private sector alternatives. Public sector options are more favourable in meeting the needs of low-income sectors of society and securing access goals and should therefore always be considered above private sector options. The South African Municipal Systems Act, which stipulates that municipalities first assess and reorganise internal delivery mechanisms prior to the consideration of private sector delivery (refer to section 2.7), should be adhered to and criteria developed to determine whether all options are considered before the adoption of private sector options. The manipulation of the word 'privatisation' by using terms such as 'restructuring' should be challenged. If 'privatisation' is referred to, than it should be made clear. Outsourcing should not be considered, rather the capacity of the public sector should be increased and more personnel with diverse portfolios should be allocated to the public sector, as it is a more sustainable option. More monies should be allocated to this end, rather than a large proportion of the budget allocated to private options (42% of DWAF's budget allocated for private consultants, refer to section 6.4).

7.8 Summary of sub problem three

Reforms have been suggested in relation to policies, strategies and implementation processes. Reviews, evaluations and audits were the vehicle suggested for informing policy, strategy, regulation and monitoring mechanism amendments and adjustments. Policies and strategies were critiqued in terms of their own principles as well as the principles and rights set out in the Constitution of the Republic of South Africa (1996) and Bill of Human Rights (1996). Fundamental flaws in policies and strategies ignored the socio-economic constraints and special considerations effecting low-income households. All relevant information, grassroots' experience and the input of all role players were not adequately synthesised in policies and strategies and decisions were made on an uninformed basis. Political platforms for engagement were lacking or inappropriate for ensuring input into water service delivery processes. Political will and the mobilisation of finances were inadequate in promoting an equitable, accessible,

affordable, efficient, effective and sustainable water service delivery framework for low-income households. National and local monitoring and regulation mechanisms were absent or inadequate.

Chapter seven provided insight into what should be done to reform policy, strategy and implementation contraventions, inconsistencies or inadequacies. The suggested reforms were beyond the scope of this study: they required further assessment based on extensive data and experience; however they provided a starting point, on which far-reaching reforms should be based. Chapter eight outlines the strategies that can be adopted to support the necessary reforms to be implemented.

CHAPTER 8
RESULTS: STRATEGIES TO SUPPORT REFORMS

Chapter eight addresses sub problem 4: what strategies can be adopted to support the implementation of the necessary reforms to South Africa's water service delivery policies and strategies? Community mobilisation, consistent with the community action research design, is at the locus of all strategies to support the implementation of the necessary reforms (as indicated in chapter 7) and is supported by aggressive networking. Lobbying and advocacy strategies are targeted at the 'inside' level hence, direct engagement occurs with policy and decision makers as well as with the 'outside' level through civil actions and use of the media. This two-pronged approach is valuable in ensuring information exchange as well as promoting significant public pressure.

8.1 Community mobilisation

The following discussion on community mobilisation is based on the community action research (CAR) process as used in the study. The statements and activities are based on pre- and post-research documentation and evaluation (by the researcher, community researchers and community stakeholders). The CAR process was a valuable mechanism for attaining community control of the water-related issues and promoting community mobilisation. The activities involved in the community mobilisation process promoted the capacity, self-confidence and assisted in equalising the power differentials of the stakeholders. The community mobilisation process, as used in the study, is presented in figure 8.1.

- Survey by community action researchers to elicit community experiences
- Analysis of outcomes by community researchers and researcher
- Information and experience sharing on issues (cause-and-effect diagrams, policy and wider national and global paradigms) through workshops
- Workshop issues (based on survey outcomes) with community researchers and communities
- Community task teams elected and terms of reference, roles and procedures decided
- Awareness programme initiated (community newspaper publications, flyers, door-to-door information campaign, scholars' information programmes and workshops)
- Public meetings called to provide information and formulate issue priorities
- Community priorities synthesised with all task teams
- Joint task team strategy workshop (information and strategy development)
- Strategies fed-back to communities for additions, adaptations and community buy-in through community meetings
- Joint task team advocacy workshop (feeding strategies into advocacy channels)
- Joint strategy and action plan coordinated by the Water Action Campaign

Figure 8.1: Community mobilisation process as followed in this study, in Msunduzi.

The following community mobilisation process activities are presented to clarify the activities presented in figure 8.1. After the surveys were completed, a two-day analysis workshop was held by the researcher with the community researchers. The workshop was valuable to evaluate the survey experience, identify survey shortcomings and provide suggestions on how the survey could have been improved upon. This was useful as the survey experience provided the community researchers with insight that could be used in their own future research exercises. The major water-related outcomes were discussed and consensus was sought to provide a common picture of the water service delivery situation (the technique of rich picturing was used, refer to section 3.6). Capacity was built on the outcomes through information and experience sharing; breaking the issues down into 'cause and effect' concepts (Woodhill and Robbins, 1999); engaging with the issues through debates and discussions; interpreting and unpacking policy into simple understandable concepts and linking the local water service delivery situation with national and global paradigms. This was followed by two workshops in each of the study areas with interested community members, which were facilitated by the researcher and supported by local community researchers. The processes involved in the community workshops were not prescriptive. The major issues were sourced from the floor (similar to the issues emerging from the surveys) and supplemented by the study outcomes. The issues and outcomes were debated until a solid comprehension of what the issues and outcomes meant to individual households and the wider communities was secured. Furthermore, the workshops provided a platform where information could be disseminated to the groups to increase the knowledge base, which was critical for advocacy processes. Hence, efforts were made to ensure that all groupings could explain issues and not just chant slogans. This step was critical, as the communities had to decide that the issues and outcomes were important (or not) before they committed themselves to supporting the process to reform the water service delivery situation. After commitment was shown in all areas, it was decided that the community researchers and community members should form a more formal structure to drive and support the reform process and create platforms where issues could be debated. It was decided that community task teams should be set up, which excluded the individual ward water committee members and community councillors to ensure that the community members had full control of the organisation and activities of the community task teams. Each of the community task teams decided their own terms of reference, roles and procedures (how to operate, communicate,

reporting mechanisms, involve the wider community and initiate feedback systems) to suit their environments and operate with optimal effect (see figure 3.2).

It was decided that awareness programmes should be initiated to raise the public consciousness to the issues at hand. Meetings were held with the community task teams to organise and plan the awareness programmes. The awareness programmes included information flyers (refer to appendix F), door-to-door information campaigns, information published through free local newspapers (refer to appendix G), street plays and scholars' information programmes. Each activity was used to promote awareness to the water service delivery situation as well as the need to act collectively to support its reform. The community task teams ensured that they were visible and that they could be contacted with information queries. Thereafter, broader public meetings were organised in each study area whereby the wider community could voice their own issues, compare them with those of the community task teams issues and research outcomes and prioritise them and join the community task team, if desired. Once this had occurred, community task teams linked with one another, synthesised and co-ordinated their priority issues.

Four community mobilisation activities were still pending at the time of the research report: a joint task team strategy workshop, community feedback into joint strategy, joint task team advocacy workshop, and joint strategy and action plan. It is envisioned that the process will be as follows. A strategy workshop will be initiated, providing specific lobbying and advocacy information (e.g. communication channels in municipal structures, identifying departments, individuals and roles, who and how to target) as well as a platform whereby community task teams can utilise relevant information to develop a strategy to address their issues. These strategies will be fed-back to the communities for additions, adaptations and to ensure a wider community buy-in. A joint task team advocacy workshop will be conducted with the community task teams and facilitated by the researcher to fine tune the community strategies and synthesise them into an all-encompassing joint community strategy co-ordinated by the Water Action Campaign. The Water Action Campaign will be managed and controlled by representatives of the community task teams. The joint strategies adopted by the communities will draw on and link up with similar civil society social advocacy strategies (see 'networking,' section 8.2).

The community mobilisation process, as employed in the research, was successful. The reasons for success were the following: community researchers were involved in the community mobilisation process from the initial stages of community action research (CAR) thereby providing the passion and direction for all activities; communities in Msunduzi faced very real concerns regarding the water service delivery framework and therefore were committed to the process of supporting reforms; and the community mobilisation process was organic and receptive to community processes and requirements. Moreover, efforts were made by the researcher to build capacity within the community task teams and 'step-back' wherever possible to promote the community ownership and control of all processes. Hence, very early on in the process, the researcher became a co-ordinator, supporter and advisor versus an actor or controller. The community mobilisation process was implemented along the same principles of CAR, thereby ensuring that all stakeholders were learners, information sharers and supporters which ensured individual and group respect, self-realisation and group cohesion (consistent with De Vos, 2000, see section 3.1.1). Regardless of the documentation of the above-mentioned community mobilisation activities, perhaps the best success indicators of the CAR community mobilisation process would be that of community-driven water service delivery reforms, which are still in their fledgling stages.

The community mobilisation process as followed in this study is not a blue print for community mobilisation and need not be applied systematically. However, an organic process could be adapted and used for similar research-based community mobilisation processes. Its benefits to the researcher, the community researchers and the emergent process of community mobilisation are numerous. Community control and full participation in the process of advocating for reforms is imperative. It is the researcher's opinion that informed communities are the strongest mechanism to push for reforms. The key issues raised in the study, after numerous consensus building and participation exercises, should form the core rallying points for a wider community action to support reforms. However, it is important that the research outcomes be seen as just one tool in advocating for reforms and should be subservient to the emergent mobilisation process. Moreover, the mobilisation process need not be approached on a large scale. It can be initiated in a few areas with a few people, thereby ensuring high levels of

understanding, which create the knowledge base on which passion and momentum can be raised.

8.2 Networking

Networking during the research period was aggressively advocated in the support of the process of community mobilisation and the reform of the water service delivery paradigm. Networking was not a systematic process; rather it took place during all research and advocacy processes. Because community task teams were initiated in different areas within Msunduzi, networking was initially localised. However, the community task teams optimised opportunities to network with Msunduzi and Durban organisations and the researcher networked with national social movements, networks and organisations. Networking was seen by all stakeholders as an opportunity to learn and to share information and was not isolated to water-related issues. Hence, it became a tool to acquire diverse resources (tangible and intangible) and support, which provided the benefits of increasing the researcher's and community researchers' perspectives on the water delivery paradigm and the different stakeholder dynamics and strengths.

From the research and consumer mobilisation process, it was found that networking provided a valuable source of experience, information, resources and support and should be aggressively sought. Networking is fundamental in building a strong advocacy strategy (consistent with Ife, 1995). The community task teams suggested that networking should be strategic and link with local, national and international social movements, campaigns, civil society organisations and research institutions. It was acknowledged by the community task teams that the principles of the potential alliance partners should be comparable with the Water Action Campaign to ensure that activities were engaged in were acceptable to all campaigners. Furthermore, as indicated by a campaign partner, networking increases the scope of advocacy and ensures that local struggles are able to access national and international platforms, even if the populace or spokesperson of the particular advocacy issue is not present (NGO, 2003). If networks are successfully captured, then local issues can be embraced by a united national and/or international voice, which are effective in pressurising for the implementation of reforms.

Networking is essential when engaging with government and municipal officials and when taking action to raise awareness on issues/causes. 'Inside' and 'outside' lobbying and advocacy strategies are also necessary for the support of reforms and although not fully operationalised, through the research, are important and will be discussed below.

8.3 Inside and outside lobbying and advocacy strategies

Although a joint advocacy plan has yet to be adopted by the stakeholders in the community action research process, it is envisioned that an 'inside' and 'outside' lobbying and advocacy strategy will be adopted by the Water Action Campaign (vehicle for the support of reforms). An 'inside' approach lobbies and advocates within the decision-making system and the 'outside' approach lobbies and advocates outside the decision-making system (ETU and The Black Sash, 2002). Hence, direct communication with decision-makers or pressure from civil society organisations or movements influence decision-makers. The chief aim of the lobbying and advocacy strategies at the local and national level should be in targeting policy and decision-makers (NGO, 2003). Hence, high-ranking officials in the relevant departments who have both the political clout and ability to implement reforms should be lobbied. The community task teams may find it difficult to identify such officials; therefore it is envisioned that advocacy workshops will be organised thereby affording the benefits of experience sharing and the joint-identification of key departmental or government officials by the community task teams and invited stakeholders (based on previous experience and engagement) and can be used to optimal effect by advocacy groups. In choosing such strategies, it will be essential to grasp a thorough understanding of available and accessible channels for advocacy and the merits of each in forwarding the objectives of the struggle for reform. Because the CAR process, as employed in this study, had not reached completion at the time of writing this report, the 'inside' strategy was utilised primarily by the researcher and the 'outside' strategy was still to be implemented. The inside lobbying and advocacy strategies document the experiences of the researcher in engaging in such processes and the outside lobbying and advocacy strategies present a course of future options and actions that may be taken by the Water Action Campaign.

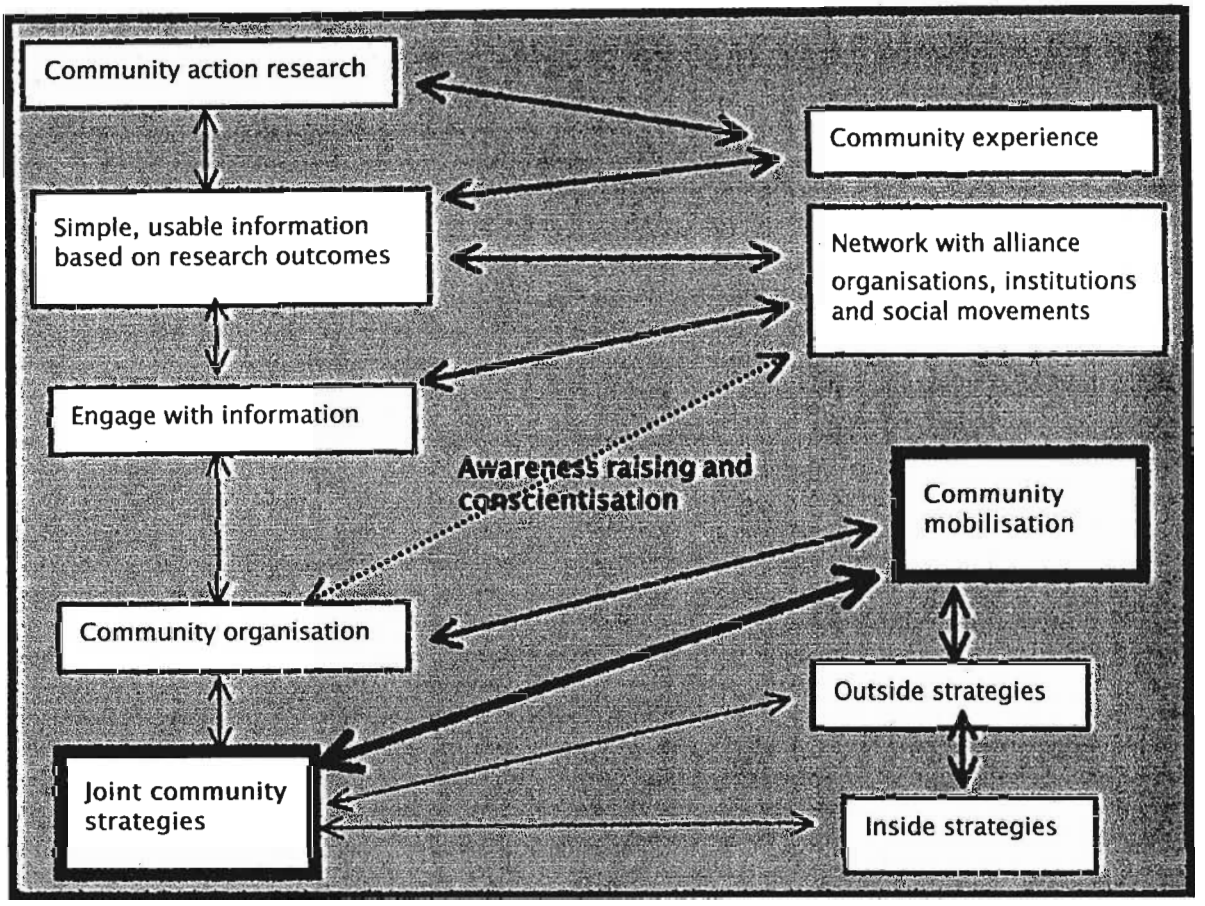

Figure 8.2: Lobbying and advocacy strategy framework that may be employed in this study, in Msunduzi.

Figure 8.2 provides a possible framework for the Water Action Campaign's lobbying and advocacy strategy, in Msunduzi. It builds on the community action research foundation, the community mobilisation process (presented in figure 8.1) and links joint community strategies into the inside or outside lobbying and advocacy strategies. It is a simple framework that is founded on the solid understanding of issues, how they are linked to local, national and international paradigms and draws on community solidarity, resources and networking.

8.3.1 Inside lobbying and advocacy strategies

The 'inside' strategy is based on the experience of the researcher, who attended various workshops/hearings which provided the platform to advocate for reforms to the Msunduzi and national water service delivery paradigm (as the elected spokesperson of the Water Action Campaign). From the researcher's experience, it was ascertained that where direct communication is possible, it is essential that a well-formulated argument is presented and backed with community experience and hard-core data. Direct communication with national officials can prove elusive, despite government rhetoric

that communication channels do exist. However, the opportunities to engage with municipal officials are more probable. Such channels should therefore be strategically utilised and could be favourable to local objectives in that local officials have a greater access to government channels and could lobby national departments on their behalf. Municipal officials are obliged to meet and speak with their citizens and may also be in a more favourable position to comprehend the issues at hand.

From the researcher's own experience, direct engagement with national departments is accessible through platforms such as the parliamentary civil society and portfolio committee workshops, public consultation meetings or public commentary on draft policies. Unfortunately, however, government officials often limit civil society input as they determine what questions are to be asked thereby confining public input to an answering forum rather than rigorous debate (based on the opinion of the researcher, representing the Water Action Campaign at such civil society and government workshops/hearings). It is essential therefore, that civil society formulate an input strategy prior to their involvement on such platforms. Lobbying selected officials that may empathise with the specific cause of the advocacy group could be valuable in ensuring that the correct information is relayed to officials and the space is provided to the public to clarify the issue at hand. This type of approach can work in the favour of advocacy groups (despite their disempowerment), as the Department of Water Affairs and Forestry may be more likely to be receptive to challenges raised by its own members than civil society groupings. Political space is essential if the voice of the public is to be heard. Platforms should be in the control of the public and government should realise their value and importance to democratic decision-making. It is the researchers' opinion that platforms should not simply satisfy pseudo-participation but should encourage fundamental debate between all stakeholders (consistent with Pretty, 1995). Civil society can advocate for the mobilisation of such platforms and can pressurise government to ensure that they are available, accessible and approachable on an equal footing. Civil society engagement should not be limited to simply providing input at government or parliamentary meetings; they should be lobbying for increased control of decision-making structures through the adoption of a similar approach to that implemented in Porto Alegre through a high level of citizen involvement in allocating, prioritising, administering and managing the local government budget and services (Menegat, 2002). Public control of the water service delivery process was indicated by

the communities involved in the research as essential for the improvement of water service delivery (consistent with section 5.4 and table 5.7). Platforms are therefore essential to ensure that information is exchanged between communities, stakeholders and decision makers and public control secured. Such a 'public control' process would challenge the political, administrative and economic system and would have to be thoroughly conceptualised- however; the Porto Alegre case and other examples could be drawn on (Keet, 2000b).

8.3.2 Outside lobbying and advocacy strategies

Outside strategies are approaches that culminate in civil action that raise the prominence of the issue/cause and raise public consciousness and government awareness to the issue at hand. Such approaches are imperative in pressurising decision-makers to address the issue/cause. Actions such as the following can be initiated for such a purpose: protesting, pickets, civil disobedience (as successfully used by the Treatment Action Campaign in advocating for an HIV/AIDS national treatment plan in 2003, [Treatment Action Campaign, 2003]) and the presentation of memorandums. Such actions should optimise the available alliance networks. Use of the media in highlighting the issue/cause is essential. Various media methods can be utilised for this end: television, radio, newsprint, press statements, letters and articles; documentaries; public debate on radio or television and public information campaigns. Actions that receive full press coverage, backed by a popular support base are valuable in pressurising decision-makers to address issues decisively.

8.4 Summary of sub problem four

Chapter eight has presented a strategy that can be adopted by communities to support the reforms, as suggested in chapter seven. It is a grassroots approach, which relies on building the capacity of communities through experience sharing, developing an informed knowledge base and the development of organisational skills to take control of the advocacy process and pressurise decision-makers to implement reforms. It relies on building strategic alliances and extensive networking. The strategy engages at both 'inside' and 'outside' levels to ensure that sufficient pressure is exerted on government departments to address the issue/cause. Chapter nine presents the study conclusions, recommendations, recommendations for improvement of the study and implications for further research.

CHAPTER 9
CONCLUSIONS AND RECOMMENDATIONS

The study sought to reveal whether South Africa's water service delivery policies and strategies were equitable, accessible, affordable, efficient, effective and sustainable for Msunduzi low-income households. The chief objective of the study was to elicit the community experience of local and national policy, strategy and implementation processes and to link these experiences to a broader analysis and interpretation of policy and strategy to identify water service delivery contraventions, inconsistencies and inadequacies. The secondary objective was to initiate community-based platforms for engagement with water-related issues and to build capacity within the local community task teams to initiate lobbying and advocacy strategies to support community-suggested and research-outcome reforms to policy, strategy and implementation mechanisms, thereby returning popular control to the locus of communities.

The study was conducted in Kwa-Zulu Natal, within the Msunduzi municipal jurisdiction, under the uMgungundlovu district municipality (DC22) in the period from October 2002-April 2003. Households in five low-income urban areas were included in the study: Imbali (units 1 and 2), Sobantu, Haniville and Thembalihle. A community action research design using non-probability sampling was employed in the study. Community researchers participated in the research process and contributed to the methodology, synthesis and collating of surveys, data collection, analyses of the results, suggested reforms to policy and strategies and formulated community strategies to support the reforms. Community researchers conducted surveys with 314 low-income households. Community focus groups, community meetings, community visitations and informal engagement with local government departments and non-governmental organisations complemented the surveys. The Water Action Campaign and community task teams were initiated to create a platform for engagement and advocacy on pertinent water-related issues based on the outcomes of the research.

The results of sub problems one and two indicated that South Africa's water service delivery policies and strategies were not equitable, accessible, affordable, efficient, effective or sustainable to Msunduzi low-income households. Sub problems three and four identified necessary policy, strategy and implementation amendments and

adjustments, and proposed community-based strategies to support the suggested reforms. The hypothesis that South Africa's water service delivery policies and strategies were not equitable, accessible, affordable, efficient, effective nor sustainable to Msunduzi low-income households, was supported. Study conclusions follow.

9.1 Conclusions

The experiences of Msunduzi low-income households to local and national water service delivery policies and strategies and the implementation of the said policies and strategies supported the hypothesis. The study conclusions implied that local and national policies and strategies that were purported to ensure that the basic service requirements and rights of low-income households were upheld, actually compounded the socio-economic constraints and compromised the human rights, justice, equity and dignity of Msunduzi low-income households. Citizens were no longer viewed as such but were regarded as consumers of basic services. Because local and national policies and strategies had failed to promote low-income household affordability and access to basic services, the financial ability of households to pay for their services determined their access. This might have been acceptable if low-income households were able to pay for their services and influence the way in which water services were delivered and managed, but limited financial flexibility and restricted political maneuvering space impeded the input of low-income households into decision-making platforms. High unemployment levels, medical expenditures (compounded by HIV/AIDS), rising basic food costs, large families, school fees and transport charges made it difficult for households to afford basic service expenditures. Concurrently communities were being increasingly marginalised from decision-making and engagement processes. Local and national policies and strategies should have provided a framework in which low-income households were able to secure basic services to sustain their livelihoods. Instead, policies and strategies contributed to the financial quandary that low-income households were struggling to overcome.

The free basic water policy failed to meet the basic water requirements of Msunduzi low-income households, with the implication that low-income households were unable to obtain the FBW utility thereby compounding access and affordability constraints. This was because low-income households were then expected to pay the full cost of their water consumption at poorly equated tariffs without receiving the benefits of

cross-subsidisation because household consumption levels generally exceeded 6kl per month. The Msunduzi municipality's limited stepped tariff structures ensured that low-income households fell into the steep second block thereby paying the same amount for their water as richer consumers who had superior in-home connections. There was no cross-subsidisation between domestic and industrial users. In fact, industrial tariffs rewarded users for high consumption by providing industry cheaper per unit rates thereby compromising social and environmental sustainability. Meters were ineffectively monitored and managed by the Msunduzi municipality. Water service-related information and the value of household monitoring was not transferred to households. Water demand management was poorly prioritised with the implication that the financial and environmental sustainability of the resource was compromised and compounded the financial constraints of the Msunduzi municipality and households. Information management systems were lacking, inadequate or inaccessible which restricted reporting and querying channels and delayed the prompt address of issues.

The water service delivery problems faced by Msunduzi low-income households were attributed to both the implementation supporting mechanisms selected by Msunduzi municipality and policy and strategy flaws. Local and national policies and strategies prioritised the economic considerations of full-cost recovery above social and environmental considerations thereby compromising the Draft White Paper on Water Service's (2002) principles of equity, accessibility, affordability, effectiveness and sustainability. Regulation and monitoring systems to identify and address implementation contraventions through punitive measures were not explicit in policies and the text of the policies did not always support or were inconsistent with policy principles. National policies generally failed to integrate all socio-economic aspects, public experience, broad stakeholder consultation and scientific bases into synthesised documents with the implication that policies lacked the information-base and public acceptance necessary for their conversion into effective and workable policies. Furthermore, the support needed to mobilise the necessary finances and secure the political will for the effective implementation of effective policies was lacking. This had the implication that policies became mere papers with little use but to satisfy legislation and to serve as tools to justify the limitation of rights.

The study revealed two significant findings. The first finding, related to policy, strategy and implementation mechanisms, showed South Africa's water service delivery policies, strategies and implementation mechanisms were inconsistent with the Department of Water Affairs and Forestry's sector goals as stated in the Draft White Paper on Water Services' (2002): of equity, affordability, efficiency, effectiveness and sustainability. They contained serious flaws and inequitably promoted economic considerations above social and environmental ones. They did not account for diverse variables and scientific investigation and were therefore incomplete. They lacked regulation and monitoring systems to identify and address implementation contraventions. They were not receptive to the socio-economic situations of low-income households and should be fundamentally re-worked. The second finding, related to popular involvement and engagement, showed community consultative processes for input into local and national policies and strategies were inadequate and often pseudoparticipatory. The political platforms for communities to engage with or influence decision-makers (locally and nationally) were lacking, and the community control, ownership and acceptance of the Msunduzi water service delivery institution and its mechanisms was low.

9.2 Recommendations

Recommendations are suggested for local and national policy, strategy and implementation reforms relating to the following issues: amended free basic water policy and implementation strategies, low-income household affordability constraints, affordability mechanisms, credit control policies, monitoring mechanisms and water demand management, administration and financial mobilisation. Recommendations highlight popular approaches through public consultation, engagement and information dissemination, extensive data collection, reviews, evaluations, audits, amendments, adjustments and the implementation or intensification of regulation and monitoring mechanisms. It is recommended that the suggested reforms be promoted through community-based lobbying and advocacy strategies, networking with strategic alliances and engaging in both 'inside' (municipal, government and Department of Water Affairs and Forestry) and 'outside' processes (outside the official lobbying framework), as used in the research process. Community researches should be provided direct channels to engage with policy makers and implementation strategists (engineers, water sector and administrative officials) to inform and assist in timely and amicable policy changes.

A national free basic water (FBW) evaluation should be implemented to determine the accessibility of the FBW utility and the experiences of low-income households to the policy. Hence, the numbers of low-income households per municipality actually consuming less then 6kl per month (thereby receiving their water for free) should be determined. Basic water requirements should be scientifically and socially assessed and a diverse and integrated approach should be adopted, incorporating all factors culminating in the increase of the FBW allocation e.g. allocation should be commensurate with household size, number of dependants, illness status and household resource usage for food security or other economic survival activities. The spirit of the FBW policy should be upheld, that is, increasing the access to a basic supply of water for all people. It may be necessary to target the amended FBW policy specifically to low-income households thereby ensuring that low-income households are the beneficiaries and not households that can afford to pay the full-cost for their water supply. The free basic sanitation policy should be integrated with the FBW policy for indigent households. Monitoring systems and criteria should be implemented by the Department of Water Affairs and Forestry to verify if free basic water and free basic sanitation efforts are meeting accessibility targets and policy objectives to ascertain if their mandates, as a department, are being met.

There should be a national review on the affordability constraints facing low-income households. Such a review should assess the income and service expenditures, current payment trends, willingness and ability to pay, social acceptance of tariffs and the social circumstances of low-income households as identified by this study but implemented on a wider basis. Affordability constraints of low-income households should be alleviated through implementing equitable tariff structures and amicable crosscutting cross-subsidisation measures e.g. this could be achieved by implementing a differentiated tariff related to the level of service (in-home or in-yard connections). Progressive redistributive tariff systems should be implemented that meet social, equity and affordability objectives, while promoting the sound use of the resource and ensuring amicable cross-subsidisation from high to low volume users in Msunduzi. Stepped tariff structures could be modelled on the following system: 1st block, amended FBW; 2nd block (upper limit 25kl per household per month), lifeline tariff; 3rd and 4th block to account for high volume consumption. The FBW allocation should be calculated at zero cost to low-income households; the lifeline tariff should be calculated at an

affordable and socially acceptable rate and the 3rd and 4th blocks should be much steeper thereby providing disincentives for high or wasteful consumption and be calculated at an economic rate. Only if the citizen falls into the 3rd or 4th tariff – hence high volume consumers, higher than the amended FBW and lifeline tariff, should they pay for the FBW tariff. A national review of municipal tariff structures should be initiated to assess if municipal tariffs are in accordance with the tariff principles stated in the Draft White Paper for Water Services (2002) and the Department of Water Affairs and Forestry should enforce tougher regulations on municipal defaulters.

The indigent policy should be reviewed and the low-income socio-economic constraints should be factored into the amended policy with special attention to the benefits of per capita calculations. Indigent households should not be restricted to less water than their basic water requirements or be subjected to the 'trickle washer' delivery of water. The amended indigent policy should be fast-tracked and all qualifying households should be assisted in registering for the subsidy. The indigent policy's relationship with the FBW policy should be reassessed and the scope of the indigent policy should be expanded to include per capita income (derived from total household income and household size), number of dependants, illness status and household resource usage (e.g. for food security or other economic survival activities).

Municipal credit control policies should uphold constitutional rights and national guidelines and ensure that the socio-economic well being of households is not compromised. Arrears on low-income household water bills should be scrapped or addressed through socially acceptable mechanisms to promote household payment regardless of the meagreness of contributions. A socially acceptable credit control policy (after high levels of participation by community members is secured) should be implemented to ensure that the environmental sustainability of water is met. Conservation and 'water wise' information documents should be distributed to assist households to regulate their water usage. Creative warning systems could be initiated by municipalities to help citizens use water more wisely e.g. a red light that flashes after a daily consumption limit (household set) has been reached (just a warning not a restrictor). Credit control policies allowing for the restriction of water supply below basic water requirements, repossession of movable property or eviction from houses for inability to pay for services should be prohibited. Monitoring and regulatory powers of

national government should be increased and municipalities in breach of fundamental social-rights should face punitive measures.

There should be a national audit reviewing the type, utilisation, value, cost and acceptance of meters and their value in terms of cost-benefit to municipalities and households. The value of bulk meters should be debated and its cost-benefit should be assessed. Information programmes should promote the use of meters as a household monitoring tool and provide information to households on municipal consolidated bills. A national household water audit and household water demand management plan should be implemented to limit the environmental and financial loss of the resource. Information management systems should be implemented to ensure that leakages are promptly reported and addressed. Community water leaks projects should be initiated and supported by municipal technical and finance resources to ensure that communities are able to acquire skills to address and control water demand management. The Municipal Income Grant should be mobilised specifically to address leakages, upgrades and maintenance. A complementary 3 year grant could be initiated that serves the same purpose as the Municipal Income Grant, but is substantially larger and moves onto other municipalities after 3 years; hence providing a financial boost for municipalities to ensure that their water systems are effectively managed and maintained. Monitoring and regulatory mechanisms should be initiated to ensure quality workmanship, water system implementation and maintenance.

The Department of Water Affairs and Forestry should dedicate sufficient resources to municipalities to ensure that public administrative systems are ready and capacitated for their new decentralised roles. A skills and technical audit should be initiated and the gaps in public administrative systems should be bolstered, with a sufficient and diversified technical and personnel base. Administrative systems should be accessible and receptive to the public. Municipal plans should be implemented to promote popular administration through public consultation, participation and information dissemination. Public systems will need to restructure to ensure the 'recapture' of public institutions by the public (the viability of Porto Alegre's public administration model should be assessed to determine its potential implementation success for South African municipalities). The political space should be available and accessible to all citizens. Community structures should be capacitated, apolitical and their powers should

be transferred to apolitical community service offices and community task teams. There should be a national review on the political nature of community structures and systems should be adapted to ensure that all people, regardless of political affiliation, are regarded and attended to equally.

National to local government transfers should be increased to ensure that municipalities are able to implement 'funded mandates' of water service delivery equity, accessibility, affordability, efficiency, effectiveness and sustainability. The equitable share should be changed to a conditional grant covering the full costs of the provision of free basic water. The equitable share should be increased, predetermined and included in budget forecasts. Municipalities should be accountable for the use and allocation of the equitable share and face punitive measures if it is misused. There should be an investigation into the circumstances whereby the bulk of municipal households are not accessing the FBW utility to determine where the equitable share is reallocated. Public finance should be mobilised to cover capital investments and social protection where users cannot afford the full costs of basic services. Public sector options are more favourable in meeting the needs of low-income sectors of society and securing access goals and should therefore always be considered above private sector options. References to 'full cost recovery, privatisation and restructuring' should only apply to sectors that can afford these costs; it should not accompany so-called 'pro-poor policies' as is evident in the FBW policy. Public sector options should be adhered to, as stated in the South African Municipal Systems Act, and criteria developed to determine if all options are adhered to prior to considering any private sector and outsourcing options. Private sector options should be comprehensively regulated and should be abandoned if fundamental social and human rights are compromised. The allocation and use of grants should be annually audited and monitoring mechanisms should be implemented. Recommendations for improvement of the study follow.

9.3 Recommendations for improvement of the study

The recommendations for improvement of the study consider study sampling, control, analysis, assumptions and possibilities to improve the study.

The household sampling criteria (known water payment difficulties and general water service-delivery dissatisfaction) was purposively selected for the objectives of the study.

However, randomisation may have provided a more realistic picture of the Msunduzi experience to South Africa's water service delivery policies and strategies. Furthermore, the survey should have included at least three rural communities for a rural-urban comparison, which would have been particularly valuable when tackling the FBW issue and the basic water requirements of low-income rural households. The control of the study could have been enhanced if the sample size had been increased, thereby providing a greater comparative and representative value to the study results.

If households could have provided more accurate household income, expenditure and arrears data, affordability models could have been produced. This would have enhanced the studies' recommendations on pricing water services affordably. If households' monthly water consumption had been elicited through accessing household municipal consolidated bills, the consumption of low-income households would have been more accurate and would have enhanced the study results. Unfortunately, the researcher miscalculated the difficulty of extracting accurate monthly water consumption figures from households. The significant low-income household consumption determinants and activities could also have been elicited thus providing insight into how to determine the free basic water allocation per household. If the basic water requirements of low-income households had been available, comparisons between the free basic water allocation and the basic water requirements would have been valuable in determining the adequacy of the free basic water allocation. Tariff models could also have been provided if accurate basic water requirement data were available. If a subjective rating had been included in the survey to determine the degree of household satisfaction with the municipality, satisfaction levels would have been more accurately ascertained. The analysis of policies and strategies could have been improved if more water-related policies and strategies had been analysed. Perhaps the most significant improvement to the study could be in accessing municipal and national statistics on how many people are actually accessing the free basic water utility (using less than 6kl per month) as this would provide the most telling indicator of whether the free basic policy is successful or not. Unfortunately, these statistics could not be obtained.

The assumptions of no political interference occurring during the data collection period and municipal officials being accessible and willing to participate in interviews and

provide relevant data were not wholly true. A significant amount of political interference occurred in endeavouring to stop the study taking place. Many of the community researchers were threatened and certain households were prevented from participating in the study. Certain municipal officials were unwilling to participate fully in interviews, were vague and were unwilling or unable to provide detailed data. This had the implication that study data could not be effectively triangulated and compromised the accuracy of results.

The study could have been substantially improved if no political interference had occurred and municipal officials were willing to participate comprehensively. Political platforms and opportunities to engage with municipal officials and community structures would have greatly enhanced the study. If community expression had been freer, the study could have elicited truer and more honest inputs. If the boundaries of the study were extended to incorporate diverse jurisdictions, the study could have provided a national voice to the study outcomes. The study could have benefited from a broader consultation, engagement and input from NGOs, especially regarding reforming South African policies, strategies and implementation processes.

The study would have been improved if the activities involved in the community mobilisation process had been completed. This would have provided a powerful indicator into the success of such a community action research design for the support of reform through community advocacy. The study implications for further research follow.

9.4 Implications for further research

The reforms (presented in chapter seven) to and recommendations (presented in section 9.2) for policies, strategies and implementation processes, were suggested through the vehicle of reviews, evaluations and audits to inform the necessary amendments and adjustments and required in-depth and integrated research. The basic water requirements, income and expenditures of low-income households should be researched to provide information necessary for amicable free basic water allocations, pricing policies, adjusted tariff structures and input into the indigent policy. Municipal and national statistics on the number of households accessing the free basic water utility are essential in assessing if the free basic water policy is successful or not. A national

affordability model for services specifically required by low-income households should be assessed. An investigation into the impact of households being restricted to only 6kl should be initiated to determine health, community stability, gender equity and psychological implications. The free basic water policy and implementation mechanisms should be thoroughly and aggressively researched.

Further nationwide research is necessary and could be based on the approach of this study to elicit a national analysis of water-related policy, strategy and implementation processes. Studies sourcing the experience of low-income households to local and national policies and strategies could be valuable in ascertaining if the socio-economic constraints of low-income households, as in Msunduzi, are adequately addressed nationally.

Public participation mechanisms and popular administration systems should be researched to provide insight into engagement channels and the value of eliciting the popular voice. Research into the accessibility, effectiveness, efficiency and democracy of community structures is necessary, as well as investigating alternative structures to enhance such structures. Community research methodologies should be researched to ascertain how communities, themselves, could research issues and contribute to the implementation of the necessary reforms based on research outcomes. Community action research, as approached in the study, should be substantially researched to provide insight into the value and effectiveness of such a research design. Community lobbying and advocacy strategies should be researched to provide usable frameworks to assist communities in influencing government. Information dissemination, acquisition mechanisms and channels should be researched to determine how communities are able to access information, and use it successfully to engage in fundamental debate.

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APPENDIX A: COMMUNITY ACTION RESEARCH WORKSHOP PROCEEDINGS

Community Action Research in Water

15 -16 October 2002

DAY ONE: Introduction to Community Action Research in Water

AGENDA FOR DAY ONE

- Introduction to workshop
- Introduction of participants - ice-breaker
- Objective of w/shop and future actions
- Water themes/issues (groups and flipcharts, report back and discussion)
- Why the need for community research and community researchers
- What is community action research
- Process of research
- Research proposal
- Research begins
- Planning phase
- Data collection and analysis
- After analysis- what to do with results?
- Evaluation of day one (round the room)

1 WHY THE NEED FOR COMMUNITY RESEARCH AND COMMUNITY RESEARCHERS?

- Research not just for academics but for communities to get hard-core data to forward own advocacies and struggles
    - Communities in best position to research what is important, how to research and collect data (trust with communities already there)
    - Communities in better position to use and analyse data and take collective action (academics often collect data and than leave with data)

"In a given country with an oppressive social structure, organised struggle by the oppressed classes may bring down the prevailing social order. But unless the masses can take a leading role in rebuilding the society they will be liable to become subordinate again to some other social class or classes and lose the power to participate in the process of social reconstruction and development as full subjects..." (Raman, 1993, cited by de Vos, 2000).

Community Action Research to stimulate initiatives and struggles by oppressed people, aimed at promoting the participation of these people as builders of a new society, should focus on their own collective action to conceptualise their own situation and find collective alternatives and action to take their struggles forward and challenge the prevailing norms.

2 WHAT IS COMMUNITY ACTION RESEARCH (CAR)?

- Research by community members in their own communities

2.1 Characteristics of CAR

- Mutual respect and trust
- Access to information, skills, ownership, sense of purpose and self reliance
- Share experiences, mutual aid, constant feedback and evaluation
- Quantitative and qualitative research
- Researcher acts as facilitator, co-learner and team-builder

3 PROCESS OF RESEARCH

- Strategic thinking- start thinking about why and how the research will be done. It is useful to get input into the proposal by affected, interested or experienced individuals

3.1 First step: PROPOSAL

- Introduction to research problem (situation now)
- Importance of study (use, value, change)
- Research problem (e.g.) Pricing water for low-income households
- Sub problems (e.g.) 3#: Affordability; income/expenditure; alternatives (help you to answer research problem)
- Conceptual framework (identify links and issues)
- Delimitations (can't investigate everything- state what will and what will not include) NARROW IT DOWN
- Assumptions (what will be taken for granted)
- Methodology (how data to be collected e.g. interviews)
- Budget (funding; always ask for more than need)
- Work plan/ time frame

3.2 Second step: RESEARCH BEGINS

- Literature review - current situation/ ideas/previous research (municipal, government or other relevant documents, internet, other community groupings, informal discussions (neighbours, friends, and community meetings). Depending on if an academic report is to be compiled; the literature review may be as informal/formal as necessary e.g. just reading or documenting
- Involve interested individuals in research processes (strategic selection of individuals to forward the process)
- Methodology: who are you going to interview (community members, municipal officials, councillors, service providers), how many people (sample size)
  - and how you are going to collect data- PLANNING PHASE
  - Identify possible research techniques- survey, interview (face-to-face), focus groups, community meetings, documentation-government, municipal records and community records (meetings)
  - Choose your technique/technique- may use a number of different techniques concurrently

- Input into technique chosen (interviews), use the core issues that came out of the water theme discussion (on flipcharts), as a base
- Form questions out of the core issues (from a workshopped group)
- Compile the questions (with 3-5 activists) into an interview sheet (be sure to add demographic indicators). Evaluate the interview sheet with the group
- Pilot your technique- test the interview with a selected number of households to see if you get the types of responses you need (adjust if necessary for clarification etc)
- Control of study- standardisation of interviews (same time, activists etc)

3.3 Data collection and analysis

- Planning- time schedule/frame- standardisation; who does what, when, how and when completed data to be collected
- Data collection- collect the data
- Data analysis- workshop the results of the research with all researchers (computer analysis (statistics)? what are the general responses and short report write-up)
- What does the data mean (painted picture)?
- Gaps- in research (maybe more information is needed for clarification- more interviews or different stakeholder input)

3.4 AFTER ANALYSIS- what to do with results

- What to do with the results/ painted picture?
- Strategic action thinking with researchers. Does the group want to take these results forward (if so, how?)?
- Disseminate information to relevant communities (pamphlets, flyers, community meetings). Findings expanded on and get input and buy-in/commitment from the wider community
- Community action on results and Plan of Action (strategic action). Community solidarity- do affected individuals want to take action, if so- HOW?
- Evaluate and adapt action plan; tailor-make or generic actions (selected communities or all)- participants to review progress collectively and formulate future course of action
- May need to initiate ACTION COMMITTEE
- May need to workshop certain issues- facilitate understanding (e.g. link local to national and international policy and more information on relevant issues)
- May want to share results and actions with other similarly affected communities (get wider solidarity)
- Extend research (if necessary)

4 EVALUATION OF DAY ONE

DAY TWO: INITIATING COMMUNITY ACTION RESEARCH FOR WATER STUDY

AGENDA FOR DAY 2

- Where are we now?
- Methodologies
- Data collection techniques chosen
- Objectives- information and actions
- Themes to include and specific questions to be asked
- Basic tips on how to ask questions
- Basic tips on how to conduct technique
- Additional items
- Time frame/schedule (who does what, when, how)
- Where do we want to take the results, how do we get there, want do we want to do - Water Action Campaign and/or organization
- Evaluation of day two (round the room)

1 WHERE ARE WE NOW?

How are we feeling as a group?
Where are we at in terms of the workshop (technique formulation, collection stage)?

2 METHODOLOGIES

Discussion on how to conduct research

3 DATA COLLECTION TECHNIQUES

- Semi-structured interviews, focus groups (and 'life stories') were decided on

Objectives of research

- To make municipality aware of problems with regard to service delivery and rectify wrongs
- Investigate communication between communities, councillors, ward committees and municipality
- Bridge gap between communities, councillors, ward committees and municipality
- Look at service delivery framework (community and municipality structures)
- Find out were the information gaps are re: water issues
- Revisit major water themes (as discussed in community groupings).
- In community groups decide what questions you need to ask (each group write a list on flipchart paper)

3.1 Basic tips on setting out questions

- Ask generic demographic questions (number of people in household, ages, genders, occupation etc)
- Interview structure- easy questions first (demographics) to instill confidence, trust and comfort; than difficult, controversial ones (income and sensitive issues); than easy ones to end off comfortably
- Ask one question at a time

- Keep 'yes/no' questions to a minimum and if deemed necessary ask them BUT ask for explanations as to why they say 'yes/no.'
- Don't ask leading questions
- REMEMBER: the person who asks the questions determines the type of responses so try and ensure that you do not limit the responses by your own understanding of the situation.

3.2 Basic tips on how to conduct an interview

- Introduce yourself (who you are, what grouping/organization you represent, why you are conducting the interviews)
- Ask permission to conduct the interview and state how long the interview will take (you may have to re-negotiate the time)
- Make the interviewee feel at ease and comfortable- be honest and open
- Emphasise that the interview will be confidential
- Be neutral- do not indicate that you disagree by shaking your head etc.
- Be interested and ask for clarification if necessary
- Record exact responses
- Probe if there is a silence (try and read the interviewee)
- Know your questions well, familiarize yourself beforehand
- STOP the interview if it is going badly. Evaluate why it went badly and move on to the next household
- Thank the interviewee and end the interview.

3.3 Additional items

- Sampling
- Discussion on councillor influence
- Time per interview sheet: 1 hour and 30 minutes per sheet
- Number of sheets per person: 15pp

4 TIME FRAME

Who	Activity	By when
Selected researchers	Synthesis, translate and collate interview sheet	17/10
Team leaders and researcher	Evaluate interview sheet (make changes if necessary) Make the copies. Give the interview sheets to team leaders	18/10
Team leaders and teams	Go through interview sheets with team. Explain certain questions and elicit clarification	21/10
All teams	Conduct interviews	21-28/10
All teams meet with team leaders	Discuss and hand interview sheets to team leaders	28/10
Team leaders and researcher	Discuss and hand-in sheets	29/10
All researchers	Analyse data	05/11
All researchers	Decide on future POA	06/11

5 WHERE TO NOW?

6 EVALUATION OF DAY 2

APPENDIX B: WATER-RELATED NATIONAL AND LOCAL WORKSHOPS ATTENDED

- South African Civil Society Water Caucus (June 2002, November 2002 and March 2003)
- Cape Town Water Caucus (Monthly meetings from February 2002-July 2002)
- Parliamentary Civil Society DWAF portfolio committee meetings (March 2002 and March 2003)
- Parliamentary Free Basic Water Hearings (6 June 2003)
- *World Summit on Sustainable Development (26 August-4 September 2002)
- Cape Town Sustainable Water Forum (Monthly meetings from April 2002-July 2002)
- Cape Town Civil society water-related workshops (February 2002-July 2002)
- *Msunduzi pre-World Summit on Sustainable Development Workshop (July 2002)
- *Msunduzi water workshop (September 2002)
- *National Water Resource Strategy hearings in Durban (October 2002)
- *Globalisation and water workshop in Msunduzi (April 2003)
- *National Water week community workshops organised by the Water Action Campaign (March 2003)

* Workshops attended by selected community researchers.

APPENDIX C: SURVEY SHEET (ENGLISH)

Water Survey

Name of Interviewer:_____

Area/community:_____

Form number:_____

Date of interview:____

Person(s) interviewed:_____

Street address:

_____

_____

_____

Number of people living in house:_____

1. Gender:_____ Age_____ Occupation_____
2. Gender:_____ Age_____ Occupation_____
3. Gender:_____ Age_____ Occupation_____
4. Gender:_____ Age_____ Occupation_____
5. Gender:_____ Age_____ Occupation_____
6. Gender:_____ Age_____ Occupation_____
7. Gender:_____ Age_____ Occupation_____
8. Gender:_____ Age_____ Occupation_____

1 Race of household:_____

2 Are you the land owner or a tenant?_____

3 How many people living in the household are employed?:_____

4 Who brings in this income (father, mother, sister, uncle etc)?:_____

5 Is there any other source of income (non-work; disability grant, pension, child support grant, remittance)?

6 Who brings in this income?:

7 Number of people who are chronically sick:_____

8 Description of sickness:

10 What is your current source of water (stand pipe, outside tap, inside tap)?

12 How far is it from your household?

13 How much water do you use per day?

14 How much water do you use per weekend?

15 Is the water that you receive enough?

☐ Yes ☐ No

16 Why/why not?

17 How much do you need per day?

18 How important is water to your household?

19 Do you think that the money you pay each month for your water is affordable?

☐ Yes ☐ No

20 Why/why not?

21 How much are you willing to pay for your water each month?_____

22 Are you in arrears now?:

☐ Yes ☐ No

23 How much do you pay towards arrears each month?_____

25 Is your water metered?

☐ Yes ☐ No

26 If yes:
Are you satisfied with the meter reading? (meter readings conducted accurately/properely)

☐ Yes ☐ No

27 Why/why not?

28 Do you think meters are a good tool in service delivery?

☐ Yes ☐ No

29 If not, what other options do you think will work?

30 Do you receive free basic water?

☐ Yes ☐ No

31 What do you know about the free basic water allowance?

☐ Nothing ☐ A little ☐ A lot

32 What is the total monthly income of the household:

less R600 R600-R1200 R1200-R2000 R2000-R3000 R3000-R4000 +R4000

33 What are the typical values for monthly bills/expenses:

Rent:_____

Water (excluding arrears payments)_____Arrears payment_____

Electricity: (excluding arrears payments)_____Arrears payment_____

Rates (annual):_____

Food:_____

School fees:_____

Transport:_____

Other:_____

34 How do you receive your bill?

35 What is the administration of bills like?

Poor Satisfactory Bad

36 Who in the household is responsible for water payment? _____

37 Where do you pay your water bill (place and distance)?

38 Are you experiencing any water leakage problems?

39 What is the water quality like?

40 Why do you say this (include health issues)?

41 Are you satisfied with the water pressure?

42 Are you satisfied with the Water Service Provider?

☐ Yes ☐ No

43 Why/why not?

44 If you have a problem (leakage, meter, billing); who do you contact and how quickly do they (municipality, ward committee, councillor) respond?

45 How do you think water service delivery can be improved?

46 What information do you need on water (service provision, conservation, education)?

47 Would like to support an action for improved water delivery?

APPENDIX D: SURVEY SHEET (ISIZULU)

Water Survey

Name of Interviewer:_____

Area/community:_____

Form number:_____

Date of interview:_____

Igama lophendule ifomu:_____

Ikheli:

_____

_____

_____

Inani labantu abahlala endlini:_____

1. Ubulili:_____ Iminyaka_____ Umsebenzi awenzayo_____
2. Ubulili:_____ Iminyaka_____ Umsebenzi awenzayo_____
3. Ubulili:_____ Iminyaka_____ Umsebenzi awenzayo_____
4. Ubulili:_____ Iminyaka_____ Umsebenzi awenzayo_____
5. Ubulili:_____ Iminyaka_____ Umsebenzi awenzayo_____
6. Ubulili:_____ Iminyaka_____ Umsebenzi awenzayo_____
7. Ubulili:_____ Iminyaka_____ Umsebenzi awenzayo_____
8. Ubulili:_____ Iminyaka_____ Umsebenzi awenzayo_____

1 Uhlanga:_____

2 Umnini womhleba/okanye uqashile?_____

3 Bangaki abahlala lapha ekhaya abasebenzayo?:_____

4 Ubani oletha imali phakathi kwalebe abalandelayo (ubaba, umama, usisi etc)?

5 Ngabe ikhona enye indlela inithola ngayo imali kungabe (impesheni/ imali yolebubezekile/isondlo sengane noma usezintabeni osezintabeni onilethela imali?

6 Ubani oholayo?

7 Bangaki abanesifo esingalapheki?

8 Chaza indlela ogulangayo

10 Nisebenzisa luphi uhlobo lukampompi)? _____

12 Aqhele kangakanani?_____

13 Nisebenzisa angakanani ngosuku?_____

14 Nisebenzisa angakanani ngempelaso?_____

15 Lamanzi owatholayo kungabe ayakwenelisa?

☐ Yebo ☐ Cha

16 Uma engakwanelisi kunga?

17 Udinga angakanani ngosuku?_____

18 Abaluleke kangakanani amanzi emzini wakho?

19 Ucabanga ukuthi lemali okumele uyikhokhe ngenyanga ungakwazi ukuyikhokha?

☐ Yebo ☐ Cha

20 Uma ungeke kungani?

21 Imalini othanda ukuyikhokha?_____

22 Unayo yini imali isilele?

 Yebo  Cha

23 Ukhokha malini ngemali isilele ngenyanga?_____

25 Unawo amamitha kwakho?

 Yebo  Cha

26 Uma Yebo:
Uyeneliseka ngokufundwa kwamamitha?

 Yebo  Cha

27 Kungani ungeneliseki?

28 Nibuka kuyindlela elula yini ukusebenzisa amamitha?

 Yebo  Cha

29 Uma kungenjalo ubona kuyiyiphi indlela engasetshenziswa?

30 Uyawathola amanzi amahhala?

 Yebo  Cha

31 Wazini ngamanzi amahhala okumele uwathole?

 Ngiyazi lutho  Ngiyazi kancane  Ngiyazi kakhulu

32 Imalini imali engenayo lapha ekhaya?

less R600 R600-R1200 R1200-R2000 R2000-R3000 R3000-R4000 +R4000

33 Ngiphe izilinganiso uma nikhokha

Imali yeRent:_____

Amanzi (ungayibali esilele)_____Imali isilele_____

Ugesi (ungayibali esilele)_____Imali isilele_____

Imali yobuninimuzi (esilele):_____

Ukudla:_____

Imali yesikole:_____

Imali yezinto zokuhamba:_____

Okunye_____

34 Usithola kanjani isikweletu sakho ngenya? (Incwadi yesikweletu noma bayakufonela)

35 Uyithola injani indlela othunyelelwa ngayo izincadi zesikweletu?

Kubi kakhulu unyangculiseka Kubi okwempela

36 Ubani okhokha isikweletu samanzi? _____

37 Usikhokhaphi isikweletu samanzi? Isho indawo nebanga olihambayo.

38 Kuyekwenzeke nibe nenkinga yokuqhuma kwamapayipi?

39 Amanzi asezingeni eligculisayo yini?

40 Ushongani, bala nezifo uma kwabakhona owathola isifo ngenxa yokuvalwa kwamanzi?

41 Uyeneliseka ngendlela amanzi aphuma ngayo empompini?

42 Uyeneliseka ngenkampani ekulethela amanzi?

☐ Yebo ☐ Cha

43 Kungani unganeliseki?

44 Uma unenkinganzi) Ukuvuza kwamapayipi, amamitha, nezikweletu) uthintana nobani ushesha kangakanani ukuphendula?

45 Ucabanga ukuthi kungathuthukiswa kanjani ukuletha kwamanzi?

46 Uluphi ulwazi ofuna ukulwazi ngamanzi?

47 Uyathanda ukuba ingxenye yomkhankaso wamanzi ahlanzekile?

APPENDIX E: DATA CODING SHEET

?	Catogorie	cd	item	cd	item	cd	item	cd	item	cd	item	cd	item	cd	item	cd	item	cd	item			
	Area	0	Imbali 1	1	Imbali 2	2	Haniville	3	Sobantu	4	Thembalihle											
	P/hh	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10
	p/sioner	0	0	1	1	2	2	3	3													
	Employed	0	0	1	1	2	2	3	3													
	Unemplo	0	0	1	1	2	2	3	3	4	4											
	Child	0	0	1	1	2	2	3	3	4	4											
	Scholar	0	0	1	1	2	2	3	3	4	4											
	Student	0	0	1	1	2	2	3	3	4	4											
2	owner	0	Owner	1	tennant																	
3	no.employ	0	0	1	1	2	2	3	3	4	4											
4	breadwin	0	family mem	1	relative	2	noone															
5	other$	0	pension	1	grant	2	remittance	3	other	5	itoho											
6	$ bringer	0	family mem	1	pensioner	2	grant rec															
7	sick	0	0	1	1	2	2	3	3													
8	whatill	0	cancer	1	HIV/AIDS	2	TB	3	Diabetes	4	BP	5	mental	6	other	7	n/a					
10	typeH2O	0	standpipe	2	outside tap	3	neighbours															
12	distance	0	n/a	1	close	2	far															
13	amntday		actual fig																			
14	amntwend		actual fig																			
15	enufH2O	0	no	1	yes																	
16	enufwhy	0	do everything	1	more needed	2	too expensive	3	comes out slowly	4	cutoffs	5	other									
17	H2Oneed		actual fig																			
18	NBh2O	0	notNB	1	NB	2	VNB															
19	afford	0	no	1	yes	2	dontknow															
20	afordwhy	0	Rsstretched	1	sick/old	2	don't pay	3	too much/1 income	4	no working	5	affordable	6	poor serv							
21	willpay		actual fig																			
22	Arrears	0	no	1	yes																	
23	Payarrea		actual fig																			
25	meters	0	no	1	yes																	
26	happymet	0	no	1	yes																	
27	whyhappy	0	efficient	1	don't rd fre	2	inaccurate	3	education needed	4	awaycheck	5	other	7	leaks							
28	toolmete	0	no	1	yes																	
29	options	0	flatrate	1	info/educ	3	FBW	5	arrangements for pay													

?	Catogorie	cd	item	cd	item	cd	item	cd	item	cd	item	cd	item	cd	item	cd	item			
30	fbw	0	no	1	yes															
31	infofbw	0	nothing	1	heard	2	a lot													
32	toincome	0	600-1200	1	1200-2000	2	2000-3000	3	3000-4000	4	4000+	5	less R600							
33	rent		actual fig																	
	water		actual fig																	
	watera/m		actual fig																	
	watera/yr		actual fig																	
	elec		actual fig																	
	eleca		actual fig																	
	rates/m		actual fig																	
	rates/yr		actual fig																	
	food		actual fig																	
	school		actual fig																	
	transport		actual fig																	
	other		actual fig																	
34	billing	0	post	1	hand	2	No receipt													
35	adminbil	0	poor	1	ok	2	bad													
36	payh2O	0	father	1	mother	2	female mem	3	pensioner	4	owner	6	noone							
37	payplace	0	m offices	1	paypoint M	2	payptscom	4	Post office											
38	leaks	0	no	1	yes															
39	QH2O	0	poor	1	ok	2	good													
40	Qwhy	0	noone sic	1	p old/rusty	2	H2O dirty	4	ppl sick	5	clean									
41	pressure	0	no	1	yes															
42	wsp	0	no	1	yes															
43	wspwhy	0	poor service	1	no comm	2	old taps/pipe	3	don't want $	4	good service	5	other	6	too exp	7	cut-off	8	have H20	
44	problems	0	mrespfast	1	mrespslow	2	councillor	3	wardcom	4	s-mainten	5	noone	7	call someone					
45	improved	0	meters	1	local com	2	service	3	repair pipe	4	afford/pay	5	info/educ	6	Flatrate	7	access	8	Prepaid	10	Fine	11
46	info	0	fbw	1	purifyh2o	2	systemwk	3	conserve	4	sanit	5	metres/pay	6	pollution	7	e/thing	8	Nothing			
47	action	0	no	1	yes															

APPENDIX F: COMMUNITY INFORMATION FLYERS (AWARENESS PROGRAMME)

MPHAKATHI QAPHELA

Umphakathi uthuleleni ngomasipala, enganiki abantu amanzi amahhala (Free Basic Water)

Kungani ikhansela lingaxoxisani nomasipala mayelana namapayipi amadala aqhuma mihla le. Amathoyilethi ayavuza.

Yini lena eyenza kufike izikweletu zamanzi bengakafiki abafunda amamitha (meter readers).

Kungani ukulungiswa kwamathoyilethi kumele kukhokhelwe, kodwa ama rates ebe emba eqolo.

IZIPHAKAMISO

Umasipala akenze izinhlelo zokuxhumana nabantu abakhele nomkhandlu (communication).

EMPUMALANGA ngase Hammarsdale, abantu bakhona basanda kuphuma ngobuningi babo befuna kukhokhwe R10.00 flat rate ngamanzi. Ngoba abantu abasebenzi, kanti abanye bahola impesheni.

Nathi njengomphakathi kumele sisukume. Phansi nokukhokhiswa izinto zingalungile.

Akucishwe izikweletu ezindala ngoba ngo 1996, uHulumeni washo ukuthi izikweletu ezindala mazicishwe ezenzeka ngaphambi ko 1993 zamanzi.

Umasipala kumele abe nezinhlelo zokufundisa abantu ngokongiwa nokubaluleka kwamanzi, kanye nezinhlelo ezifana namanzi amahhala (free basic water), nokongiwa kwemvelo (nature conservation).

Amakhansela kumele afundiswe kabanzi ngezinhlelo zikazwelonke, ezibandakanya ukuthunyelwa imisebenzi yabantu kubona (service delivery).

Ofisa ukuba yingxenye yalomkhankaso akathintane nabanye abayibonayo lempicabadala.

Ikhishwe yizakhamuzi ezikhathezekile.

15 /11 / 02

Amanzi atholakala mahhala

Amanzi 1

Sonke siyawadinga amanzi ukuze siphile. Baningi abantu abahluphekayo abangakwazi ukukhokhela amanzi abawasebenzisayo. Uhlelo lwamanzi amahhala lwaqala ngomhlaka 1 Januwari 2002. Lolu hlelo lunikeza wonke umuntu owongayo amanzi ithuba lokuthola amanzi mahhala.

Lolu hlelo lusebenza kanje:
Amakhaya asebenzisa amanzi angaphansi kwamalitha awu 6000 ngenyanga eyodwa akumele bakhokhe. Abantu abasebenzise ngaphezulu kwamalitha awu 6000 ngenyanga eyodwa kumele bawakhokhele wonke lawo manzi.

Uke usihlole nje isitatimende sakho samanzi ukuze ubone ukuthi uyawathola yini amanzi amahhala? Hlola isitatimende sakho samanzi ngoba uma usebenzisa ngaphansi kwamalitha awu 6000 kumele ungakhokhi nhlobo.

Isibonelo se-akhawunti yangempela.
Yonke imininingwane yomnikazi ishintshiwe.

Msunduzi Municipality

City Treasurer
Civic Centre - 333 Church Street

CONSOLIDATED BILL
VAT REGISTRATION No. 4600107835

Fax (033) 395-151

ACCOUNT NO.	
3 36964420	FOR 1235 DUSE RD

NAME FT MNGUNI — TAX INVOICE

DATE	CODE	PRESENT READING	PREVIOUS READING	CONSUMPTION	SCALE	RATE	AMOUNT
BALANCE AT LAST MONTHLY ACCOUNT							8836,21
22/01 W A		6528	6495	33 2			
WATER PERIOD 29 DAYS							
FIRST 6 KL				6			* 17,07
OVER 6 KL				27		5,62000	* 151,74
SEWERAGE							* 29,75
REFUSE REMOVAL							* 19,53
* VAT @ 14%							29,27

ACCOUNT DATE	ARREARS 60 DAYS	ARREARS 30 DAYS	CURRENT ACCOUNT	TOTAL DUE §
31/01/03	8597,85	238,36	238,36	9074,57

§ PLEASE SEE NOTES ON REVERSE HEREOF

LIABLE FOR RESTRICTION OF WATER SUPPLY

THE HONOURABLE PROF. DR. REV. MR. MRS. MISS

FT MNGUNI
1235 DUSE RD
IMBALI
4320 IMBALI

THIS PORTION MUST ACCOMPANY PAYMENT

EASYPAY ALLOCATION 0486 >>>>>>> 9 1840 3686 4420 03

ACCOUNT NUMBER	ARREARS	CURRENT ACCOUNT	TOTAL DUE §
3 36964420	8836,21	238,36	9074,57

Okushiwo imitha yakho

Isikweletu senyanga edlule

Imali okhokhiswa yona ngamakhilolitha awu 6 okuqala

Imali yamanzi oweqe ngawo emakhilolitheni awu 6 (R5,52 ikhilolitha)

Amanzi owasebenzisile (33 khilolitha = 33 000 litha)

Ukuthuthwa kwendle (ayishintshi)

VAT (intela)

Imali oyikweletayo

Isamba senyanga

Ukuthuthwa kukadoti (ayishintshi)

Isamba esikweletwa uF.T. Mnguni

Isitatimende sakho sikhombisa amanzi owasebenzisile ngamakhilolitha. Ikhilolitha elilodwa lilingana namalitha awu 1000. Kusho ukuthi amakhilolitha awu 6 enza amalitha awu 6000.

Kubalulekile kakhulu ukuthi izisebenzi zikamasipala ezifunda amamitha zikwenze lokhu ngemfanelo nyanga zonke. Abanye abasebenza ukufunda amamitha abawafundi nyanga zonke bese bebhala sakuqagela besondezela kokujwayelekile. Kungaba into enhle ukuba uzifundele isitatimende samanzi ukuze ulandele ukuthi ukhokhiswa ngokufanele yini. Lokhu kungakusiza kube ubufakazi uma usebenzise ngaphansi kwamalitha awu 6000 kuleyo nyanga kodwa wazithola ukhokhiswa.

Ekuqaleni kwenyanga bhala phansi izinombolo ezisemitheni yakho. Zibhale futhi ekupheleni kwenyanga. Uma ususa inombolo yasekuqaleni kwenyanga kuleyo yasekupheleni, uzothola inani lamanzi owasebenzisile.

Ekupheleni kwenyanga	6528 khilolitha
— ekuqaleni kwenyanga	— 6495 khilolitha
= amanzi owasebenzisile	= 33 khilolitha

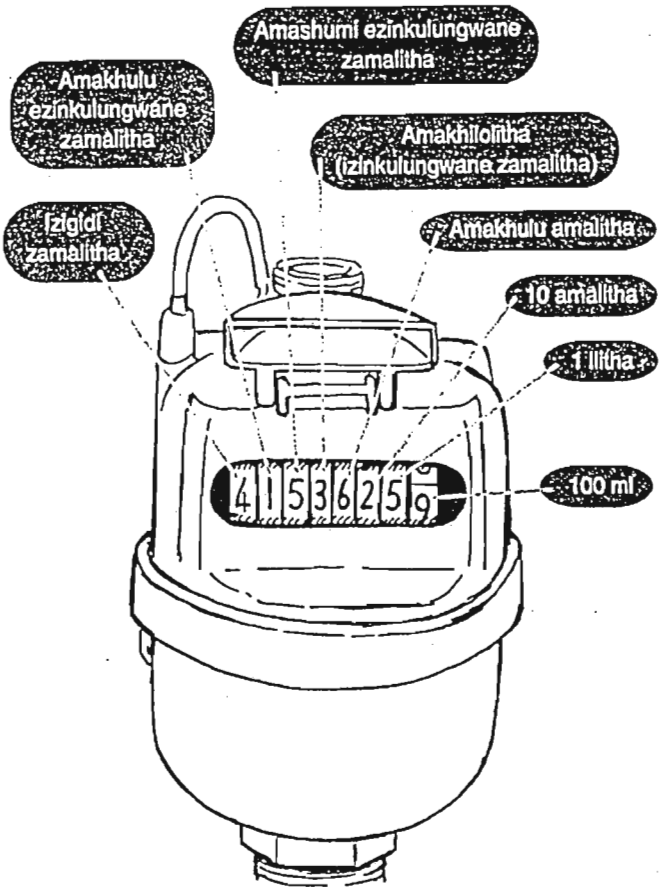
Water Action Campaign (WAC)
Uma ninezinkinga zamanzi endaweni yangakini, nifuna ukulusukumela lolo daba, ningashayela abakwa-WAC. Ningakhuluma noNonono Mbambo (073 2322306) noJulie Smith (072 4176749).

Inombolo yamahhala ongayishayela: 0800 001868 Ngesonto elizayo: Ukufunda imitha yakho ngokufanele

Ukufunda imitha yakho ngokufanele

Amanzi **2**

Zimbili izinhlobo zamamitha. Iluphi uhlobo onalo ekhaya lakho?



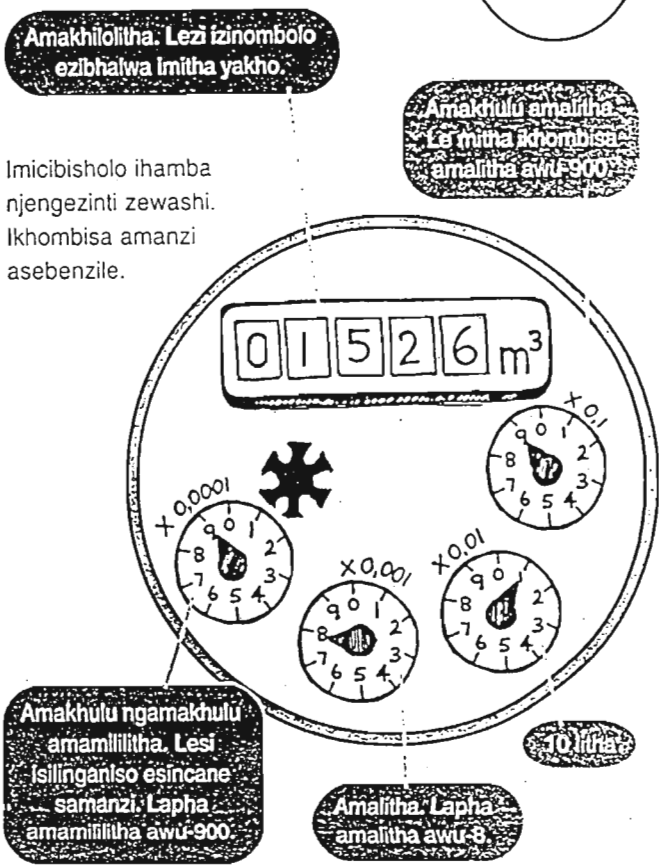
Le mitha iveza amalitha awu- 4 153 625,9 amanzi asetshenzisiwe. Imitha yakho ibhala kuphela amakhilolitha, lezi izinombolo ezine zokuqala, 4153.

Mangaki amakhilolitha avezwa imitha ngayinye?

6 3 6 4 8 7 2 5 ___ ___ ___ ___

5 4 7 9 6 2 2 4 ___ ___ ___ ___

7 6 3 1 4 2 8 2 ___ ___ ___ ___



Le mitha iveza amalitha amanzi awu-1 526 918,9. Lokhu kusho amanzi angaphezulu kwesigidi nohhafu asebenzile. Isisebenzi sikamasipala esifunda amamitha sifunda amakhilolitha kuphela, ngakho-ke sizobhala 1526 kuphela.

Lolu hlobo lwemitha alufundeki kalula. Kumele uqale ubuke izinombolo ezibhalwe ngenhla bese ubuka indilinga ngayinye, bese uthola ukuthi imicibisholo ikhomba ziphi izinombolo. Qala ngendilinga ephezulu ngasesandleni sokudla.

Ngesikhathi amanzi esebenza endlini yakho, izinombolo zizolokhu zishintsha zikhombise amanzi asebenzile ngobuncane bawo. Kwamanye amamitha lezi zinombolo zikhonjiswe ngakwesokudla kanti kwamanye zikhonjiswe ezindilingeni ezincane ngakwesobunxele.

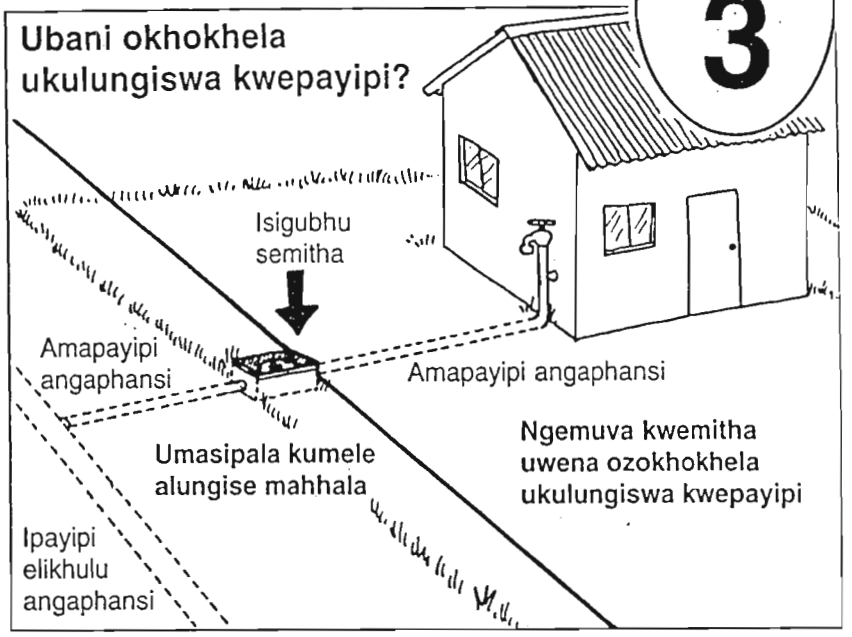
Kungaba into enhle ukuba uzifundele isitatimende samanzi ukuze ulandele ukuthi ukhokhiswa ngokufanele yini.

Water Action Campaign (WAC)
Uma ninezinkinga zamanzi endaweni yangakini, nifuna ukulusukumela lolo daba, ningashayela abakwa-WAC. Ningakhuluma noNonono Mbambo (072 5465869) noJulie Smith (072 4176749).

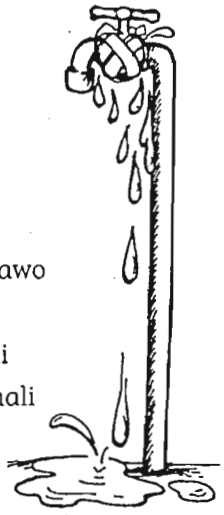
Ukuconsa kwamanzi

Amanzi 3

Baningi abantu abanompompi noma amapayipi aconsayo emizini yabo. Uma kwenzeka lokhu emzini wakho kusho ukuthi kunamanzi amosekayo. Lokhu kuphinda kumose imali ngoba kufanele kube khona owakhokhelayo la manzi aconsayo. Uma uwakhokhela amanzi kusho ukuthi uzokhokhela namanzi ongawasebenzisanga. Uma ungeyena umuntu okhokhayo kusho ukuthi siyakhula isikweletu sakho. Kuyinkinga lokhu ngoba vele uyogcina ukhokhile.



Uma amanzi econsa kusukela kwimitha kuza emzini wakho, uwena ozokhokhela lawo manzi aconsayo. Kufanele wenze imizamo yokulungisa ipayipi noma umpompi. Kanti uma amanzi econsa emitheni qobo noma epayipini eliza kwimitha yakwakho, umasipala uyena ozolungisa akhokhele lowo msebenzi.



Uma ungakwazi ukuzilungisela leyo ndawo econsayo, ungacela umasipala eze kokwenzela kodwa uzokukhokhisa imali uma ukuconsa kungale kwemitha. Le mali ungakwazi ukuyikhokha kancane kancane.

Abafakela amapayipi aya endlini kuba abantu abazimele okungebona abakamasipala. Kuyenzeka bafake amapayipi ashibile asheshe aconse. Kumele bakupheshele mahhala kuze kuphele iminyaka emibili.

Ungahlola kanjani ukuthi unayo indawo econsayo?

Vala bonke ompompi emzini wakho. Qikelela ukuthi akekho oshaya ithoyilethi noma osebenzisa amanzi ngesikhathi wenza lokhu. Hamba uyohlola imitha yakho ngesikhathi sebevalwe bonke ompompi. Uma kungekho ndawo econsayo, akumele izinombolo zishintshe noma zihambe ngoba bonke ompompi bavaliwe. Uma zihamba izinombolo kusho ukuthi ikhona indawo econsayo.

Uma kunendawana elokhu inotshani obuluhlaza nobukhula kakhulu kunobunye kungenzeka ukuba kunokuvuza epayipini elingaphansi.

Kubalulekile ukuwalungisa amapayipi avuzayo. Uma engalungisiwe kulukhuni ukuthi umuntu angasebenzisa amanzi angaphansi kuka 6000 litha ngenyanga. Lokhu kusho ukuthi uzokhokha kakhulu. Amanzi ayisipho semvelo esiyigugu, ngisho ngabe akuwena ozokhokha akufanele uwamose amanzi.

Ukuconsa kwamanzi kungadalwa izinto ezehlukene:

- Umpompi ongavaleki kahle. Kungenzeka ukuthi umpompi wakho awuvaleki kahle nje ngoba usudinga irabha entsha. Le rabha ayibizi, ungazithengela yona. Qaphela ukuthi ompompi abalingani, ngakho-ke thola usayizi ofanele werabha.
- Kungaba neconsi lapho kuhlangana khona amapayipi.
- Kungaba neconsi ngenxa yepayipi elibhobokile noma eselithombile. Kungenzeka ukuthi livuza nje lingaphansi komhlabathi alivele obala.

Water Action Campaign (WAC)

Abomkhankaso wezamanzi bazohambela imiphakhathi kusukela ngomhlaka 17 ku 21 Mashi. Thola ngalokhu ekhasini lokuqala noma ubashayele ucingo.

Uma ninezinkinga zamanzi endaweni yangakini, nifuna ukulusukumela lolo daba, ningashayela abakwa-WAC. Ningakhuluma noNonono Mbambo (072 5465869) noJulie Smith (072 4176749).

Inombolo yamahhala kamasipala: 0800 001868

Ngesonto elizayo: Ayinto engakanani amalitha awu 6000?

Uyawathola awamahhala?

Amanzi 1

Uhlelo lokuthola amanzi amahhala uma ungeqile ku 6kl ngenyanga, lwaqala ngonyaka odlule. Usebenzisa amanzi angakanani? Ngabe uyakhona ukuwakhokhela lawo manzi? Ungakwazi yini ukwehlisa indlela osebenzisa ngayo amanzi? Ngabe ukwehlisa ukusebenzisa amanzi kuzojivaza isimo sempilo emndenini wakho?

Lolu hlelo lusebenza kanje:
Uma usebenzisa amanzi angaphansi kwamalitha awu 6000 ngenyanga eyodwa akumele ukhokhe. Uma weqile ku 6000 ngenyanga kumele uwakhokhele wonke lawo manzi, awuwatholi amanzi amahhala.

Hlola isitatimende sakho ukuze ubone ukuthi uyawathola yini amanzi amahhala? Xhumana nomasipala uma unenkinga. Uma ikhona indlela, ungalokothi uyeke isikweletu sakho sikhule, xoxisana nomasipala ukhokhe kancane kancane.

Isibonelo se-akhawunti yangempela.
Yonke imininingwane yomnikazi ishintshiwe.

Msunduzi Municipality

City Treasurer
Civic Centre - 333 Church Street

CONSOLIDATED BILL
VAT REGISTRATION No. 4600107835

Fax: (033) 395-151

ACCOUNT NO.
3 45629875 — ikheli

NAME

TAX INVOICE

Okushiwo imithi yakho

DATE	CODE	PRESENT READING	PREVIOUS READING	CONSUMPTION	SCALE	RATE	AMOUNT
BALANCE AT LAST MONTHLY ACCOUNT							8836,21
22/01 W A		6521	6495	33 2			
WATER PERIOD 29 DAYS							
FIRST 6 KL				6			17,07 *
OVER 6 KL				27		5,62000	151,74 *
SEWERAGE							20,75 *
REFUSE REMOVAL							19,5 *
* VAT @ 14%							29,27

Amanzi owasebenzisile (33 khilolitha = 33 000 litha)

Isikweletu senyanga edlule

Imali okhokhiswa yona ngamakhilolitha awu 6 okuqala

Inhlawulo *ephezulu* yamanzi oweqe ngawo emakhilolitheni awu 6 (R5,62 ikhilolitha)

Ukuthuthwa kwendle (ayishintshi)

VAT (intela)

Ukuthuthwa kukadoti (ayishintshi)

Imali oyikweletayo

Isamba senyanga

ACCOUNT DATE	ARREARS 60 DAYS	ARREARS 30 DAYS	CURRENT ACCOUNT	TOTAL DUE §
31/01/03	8597,85	238,36	238,36	9074,57

Isamba osikweletayo

§ PLEASE SEE NOTES ON REVERSE HEREOF

E402

LIABLE FOR RESTRICTION OF WATER SUPPLY

Isitatimende sakho sikhombisa amanzi owasebenzisile ngamakhilolitha. Ikhilolitha elilodwa lilingana namalitha awu 1000. Kusho ukuthi amakhilolitha awu 6 enza amalitha awu 6000.

THE HONOURABLE/PROF./DR./REV./MR./MRS./MISS.

THIS PORTION MUST ACCOMPANY PAYMENT

igama nekheli

EasyPay

ALLOCATION 0486 >>>>>>> 9 1840 3686 4420 03

ACCOUNT NUMBER	ARREARS	CURRENT ACCOUNT	TOTAL DUE §
3 45629875	8836,21	238,36	9074,57

Ngabe umndeni wakho usebenzisa ngaphezulu kuka 6kl ngenyanga? Ngabe kudalwa yini lokhu? Abantu abaningi bathi amanzi awu 6kl ngenyanga mancane, awenele ukupheka, ukuwasha, ukugeza, ukuphuza nokunye. Imindeni eminingi isebenzisa 20kl kuya ku 25kl ngenyanga. Amanzi asebenza kakhulu-ke uma kunezingane, kunabantu abadala noma uma kunabantu abagulayo ikakhulukazi asebeguliswa yingculazi. Baningi abathi ayikho indaba yamanzi amahhala, wena uthini?

Ekuqaleni kwenyanga bhala phansi izinombolo ezisemitheni yakho. Zibhale futhi ekupheleni kwenyanga. Uma ususa inombolo yasekuqaleni kwenyanga kuleyo yasekupheleni, uzothola inani lamanzi owasebenzisile.

Ekupheleni kwenyanga	6528 khilolitha
— ekuqaleni kwenyanga	— 6495 khilolitha
= amanzi owasebenzisile	= 33 khilolitha

Water Action Campaign (WAC)
Uma ninezinkinga zamanzi endaweni yangakini, xhumanani nekhansela kanye nomasipala njengomphakathi. Ningasibhalela ekhelini lethu elingenhla ukuze izincwadi zenu sizidlulisele kwabakwa-WAC.

Inombolo yamahhala ongayishayela: 0800 001868

Ngesonto elizayo: Ukufunda imitha yakho ngokufanele

Usebenzisa angakanani ngosuku?

Amanzi 2

Uhlelo lwamanzi amahhala lukuvumela ukuthi usebenzise amanzi awu 6kl kuphela ngenyanga noma amalitha awu 200 kuphela ngosuku. Nisebenzisa amanzi angakanani ekhaya lakho ngosuku? Niwasebenzisela ukwenzani amanzi?

Ake ubuke nasi isibonelo sokusebenza kwamanzi emndenini onabantu abahlanu.

Ikhaya lakho lingakwazi yini ukuphila ngamanzi awu 200 litha ngosuku? Abaningi bathi bayehluleka ukuphila ngo 200 litha ngosuku. Wena uthini?

Amanzi asebenza kangakanani uma abantu bebaningi, kunezingane, abadala noma abagulayo?

Esikwenzayo ngamanzi	Mangaki amalitha	Izikhathi ezingaki	Sekukonke
Ukugeza izitsha	30 litha	2	60
Ukupheka	8 litha	2	16
Ukugeza endishini encane	30 - 50 litha	5 abantu kanye ngosuku	150 (30 litha)
ukuwasha	50 litha	1	50
Ithoyilethi	9 litha	5 abantu kathathu ngosuku	135
Ukuhlanza indlu	5 litha	1	5
Iketela	1,5 litha	2	3
Amanzi okuphuza	uhhafu welitha	5	2.5
Isamba samanzi asebenzile ngosuku ukwenza yonke imisebenzi			421.5 litha

Amanzi asetshenziswayo kulo mndeni awu 421.5 litha. Uma ususa u 200 litha wamahhala kusho ukuthi ngosuku basebenzisa 221.5 litha. Sekweqile esikalini samahhala, bazowakhokhela wonke.

Gcwalisa leli thebula uzibalele ukuthi angakanani amanzi owasebenzisayo ekhaya ngosuku:

Esikwenzayo ngamanzi	Mangaki amalitha	Izikhathi ezingaki	Sekukonke
Isamba samanzi asebenzile ngosuku ukwenza yonke imisebenzi			