

**Examining Consumers Perceptions on  
Water Supply and Sanitation Services: A  
Case Study of Ohlange Township, Durban,  
South Africa.**

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## **ABSTRACT**

Governments in many developing countries have stepped up efforts to provide water and sanitation services sustainably to as many people as possible. In some instances, time frames for provision of services to all of their citizens have been set. While these are commendable efforts, the question whether these services are provided efficiently remains unanswered. In South Africa, although the government conducts consumer satisfaction surveys, seldom are citizens consulted for their views. While its efforts have been hailed as a success in the post-apartheid era, there have been many obstacles in the supply process. The assumption has been that the government knows what the citizens want and gives it them, irrespective of their concerns. This study interrogated this assumption as its overall research objective, aiming to evaluate whether a supply-driven approach is effective in satisfying the demands of the consumers.

As such the study sought to gain insight into the perceptions of Ohlange Township residents in Inanda, Durban, regarding water supply and sanitation services. The study found out that many of these residents could not afford to pay for basic services, although they are currently expected to pay for some of the costs of service provision. However, in a resource-constrained environment, the government can no longer sustainably provide these services without recovering costs. In this case, the government faces the challenge of balancing its constitutional mandate of providing all citizens with basic services and the demand by the poor for improved services they cannot afford. In this case, supply-led delivery system is severely limited in fully addressing consumer demands. This approach also results in poor service delivery due to inefficient resource management. It also disempowers communities because they are not involved in decision-making processes. Based on the study findings, the demand-led approach, one that is consumer-driven, is recommended. This approach puts the consumer at the centre of the delivery of basic services; allows consumers to participate in decision-making processes and encourages them to honour their obligations by paying for the services received.

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## DECLARATION

The work contained in this document was undertaken in the partial fulfilment of a Masters Degree from the School of Development Studies at the University of KwaZulu-Natal.

This is to declare that this research is my own work, and has not been used previously in fulfilment of another degree at this University, or any other. Any use of the work of others has been fully noted in the text.

Signed 

Date 17-09-2008

## **LIST OF ACRONYMS**

ANC – African National Congress

EWS – eThekweni Water Services

DWAF – Department of Water Affairs and Forestry

DPSA – Department of Public Service and Administration

HSRC- Human Sciences Research Council

RDP – Reconstruction and Development Programme

UN – United Nations

UNDP-United Nations Development Program

UNFPA – United Nations Population Fund

UN-HABITAT- United Nations Human Settlement Program

WB – World Bank

WISA – Water Institute of Southern Africa

WRC – Water Research Commission

WSP – Water Sanitation Program

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# CHAPTER ONE: CONTEXT AND BACKGROUND

## 1.1 INTRODUCTION

A clean water supply and adequate sanitation are prerequisites for a reasonable standard of living. (Kibata, 2000). Governments across the world are faced with the challenge of ensuring that all their citizens have access to a safe water supply and adequate sanitation. It is estimated that 1.1 billion people have no access to safe drinking water, 2.6 billion people have no access to proper sanitation and more than five million people die from water-borne diseases each year (WISA, 2007). Malaria, unclean water and poor sanitation are among the world's biggest killers of children. It is estimated that 1.8 million children die from diarrhoea each year

Continuous access to clean water and adequate sanitation is also critical for sustainable development<sup>1</sup>. Not only does public health suffer if clean water is not accessible, but economic activities such as agriculture and industry are also affected (Otieno, 2007). This may lead to the disintegration of societies that have been built over centuries.

In the past 50 years, the world's population has increased more than two-and-a-half times to about 6.4 billion (World Bank, 2007). During the same period, the demand for fresh water increased fourfold (UNDP, 2004). On a global scale, it is estimated that 3.4 trillion m<sup>3</sup> of fresh water are drawn every year, with agriculture the biggest user (UNDP, 2007). The United Nations (UN) has predicted that up to seven billion people in 60 countries may face water scarcity by the year 2050 (WISA, 2007). Developing countries are likely to experience problems on an even larger scale.

South Africa has limited water resources, which are unevenly distributed across the country (Earle *et al*, 2005; Seetal and Quibell, 2004). The needs of development and the natural cycles of drought and floods place current resources under even more pressure. The challenge facing the South African government is the need to deliver quality and improved living conditions for the poor, while at the same time maintaining opportunities for economic growth. In order to reverse the apartheid legacy there is also a need to ensure that this scarce resource is distributed equitably.

South African water service providers are faced with a number of key challenges. The first is backlogs. Under the previous government, Black people were denied access to services (DWA, 2002). The backlogs are massive, a situation compounded by the curtailing of the national

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<sup>1</sup>This is development that meets the needs of the present without compromising the ability of future generations to meet their own needs (WISA, 2007:32).

budgetary allocations to the municipalities who have been constitutionally mandated to provide these services (Robbins, 2005). Some municipalities are able to deliver quality services while others are struggling due to lack of capacity (Earle *et al*, 2005). Associated with this challenge is the issue of cost recovery. The unevenness of South Africa's economy, which is characterized by vast income disparities, means that many consumers struggle to pay for basic services (Naidoo and Mosdell, 2004).

The situation has been further exacerbated by the inefficiency of most local municipalities in delivering quality water and sanitation services (Coates and Sansom, 2001). The failure of many municipalities to instil a service ethos has led to protest action (Smith, 2003). Poor customer service results in a lack of communication on the part of utilities, lack of feedback mechanisms and slow response to customer complaints.

The *Batho Pele* principles aim to improve and transform public sector service delivery, and encourage utilities to acquaint and reorient themselves in favor of the customer (DPSA, 1997). The Water Services Act stipulates that "every water services authority has a duty to all consumers or potential consumers in its area of jurisdiction to progressively ensure efficient, affordable, economic and sustainable access to water services" (Naidoo and Mosdell, 2004: 4). It is clear that customer service is a critical success factor in providing a quality water supply and sanitation services.

The concept of customer service and satisfaction in water supply and sanitation services has received inadequate attention in South Africa (Earle *et al*, 2005). This is partly explained by the fact that these services were provided on a discriminatory basis prior to 1994 (Goldin, 2005). There has been insufficient understanding of the importance of examining consumer perceptions as a tool to improve service delivery.

It is against this background that this study sought to gain insight into the perceptions of Ohlange Township residents in Inanda, Durban, with regards to water supply and sanitation services.

## **BACKGROUND OF THE STUDY**

The UN emphasizes that provision of adequate, clean water and sanitation services is of critical importance. In September 2000, the United Nations Millennium Declaration, which was endorsed by 189 countries, set out Millennium Development Goals (MDGs) to be reached by 2015 (Cassels, 2004). The seventh of the eight goals on development and poverty eradication aims to halve the number of people without sustainable access to safe, clean drinking water (UNDP, 2007). Around

1.2 billion people do not have access to safe water and 2.6-billion lack access to basic sanitation (Cairncross *et al*, 2003). The UN acknowledges the importance of providing an adequate water supply and proper sanitation facilities and services for all people (Sachs and McArthur, 2005). The benefits of such provision, the UN asserts, include reducing the burden of disease from water-related ailments as well as the creation of an equitable, sustainable use and management of water resources for poverty alleviation and socio-economic development (Rheingans et al, 2006). Hutton *et al* (2004) further contend the provision of clean water and sanitation will allow people to live longer, healthier lives and become more productive.

The MDGs have helped countries to set their own targets for water and sanitation service delivery. The South African government has committed itself to meeting the basic needs of all its citizens as well as ensuring that its entire population has access to adequate sanitation (Pape and McDonald, 2006; DWAF, 2002)<sup>2</sup>. The government intends to improve on the MDGs and hopes to completely remove the water and sanitation backlog by the year 2010 (DWAF, 2002). Mechanisms to remove the backlog and raise service delivery levels across the nation, especially in previously disadvantaged areas, have been initiated (Hemson, 2004). However, it is argued that additional resources are needed if this goal is to be realized. Hemson (2004) argued further that although social spending on health, education, welfare, housing and other social services has risen from 52.9 percent a decade ago to 58.3 percent of non-interest expenditure in the current fiscal era, considerable additional spending is necessary to provide full access to these services. This will be necessary to meet the stated goals of the Reconstruction and Development Programme (RDP) and specific targets in water and sanitation in South Africa's bid to reach its MDGs (Hemson, 2004).<sup>3</sup>

The development and implementation of water and sanitation policy in South Africa can be divided into three distinct periods:

### **1.1.1 The pre-1994 Period**

Prior to the end of apartheid in 1994, government policies were geared towards the needs of the few, mostly the minority white group. These policies were reflected in water supply and sanitation. According to the DWAF (1994), the development of the country's water resources was linked to

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<sup>2</sup> Sanitation refers to the principles and practices relating to the collection, removal or disposal of human excreta, household waste water and refuse as they impact upon people and the environment ( WRC, 1998: 5). Good sanitation includes appropriate health and hygiene awareness and behaviour and acceptable, affordable and sanitation services (WSP, 2001).

<sup>3</sup> The government intends to halve the sanitation backlog by 2015, by completely removing the backlog by the year 2010 ( DWAF, 2002).

The RDP is the government's key policy framework that provides guidelines on the delivery of all basic services such as housing, electricity, water and sanitation services ( Robbins, 2005: 63).

support for the growth of the agricultural sector, rather than poverty alleviation in Black communities. Water was used as an instrument for stimulating economic growth in both the mining and agricultural sectors. This was further exacerbated by political and administrative systems that were racially skewed (Goldin, 2005). The provision of water and sanitation services was thus conditioned by political patronage and allegiance to the state (DWAF, 2002). Government was the sole provider and subsidizer of these services to municipalities (McDonald, 2002a). This ultimately resulted in the inequitable distribution of these services. It is worth noting that due to the “riparian principle”<sup>4</sup>, access to water was dependant on access to land, which was politically controlled (Turton and Earle, 2005).

During this period the country was divided into eleven different “homeland” administrative and political areas (DWAF, 2002). This led to a fragmented approach to service provision with no cohesive strategy, guidelines or support structures to guide the provision of water and sanitation services (Robbins, 2005; Hemson, 2004). Both the former “Black” urban and rural areas had little or no water and sanitation services, and where the services were provided they were often in a bad state of disrepair (DWAF, 2002). Services provided to Black areas were inferior to those given to white communities (Earle *et al*, 2005). According to Mackay (2003), white local authorities kept separate revenue accounts from those of the Black townships under their jurisdiction. Townships and rural areas were left on their own (DWAF, 1995). In most Black townships, water was provided through a stand-pipe. Those who had the privilege of an in-yard or in-house connection paid a monthly rate for the services they received. As the political situation continued to be volatile, the majority of the Black people began withholding payment for services such as water and electricity (DWAF, 1996). This culture of non-payment for municipal services led to civil disobedience (Goldin, 2005). Interestingly, the government accepted this practice and carried on providing services in a bid to prevent political tension escalating any further (MacDonald, 2002a). Local municipalities that were led by Black people were meant to raise their own revenue and provide services, but they also “became a point of contention between various civil and political groups” (Earle *et al*, 2005: 9).

In addition to lack of capacity in these areas, there was also no institutional framework that established clear responsibilities. There was also an overlap of institutional boundaries and many of the areas in greatest need were excluded (DWAF, 2002). Hemson (2004) further contends that the

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<sup>4</sup>This was a method of allocating water, whereby owners of land could take as much water as they could use beneficially and if they could afford it, they could impound all the surface water (MacKay, 2003:55). This method of water allocation, afforded unfair opportunities to minority whites, to control the country’s resources (Earle *et al*, 2005:8).

provision of sanitation services focused primarily on building toilets, sewer systems<sup>5</sup> and maintenance, with little consideration given to community needs (Hemson, 2004). As a result, those who had inadequate sanitation were forced to continue using the bucket system, rudimentary pit toilets or the veld.

### 1.1.2 The 1994-2001 Period

The transition to democracy was not easy. By the late 1980s, the political situation was becoming increasingly challenging for the apartheid government. The townships posed a formidable challenge and the war in Angola was draining the government coffers (Buzan *et al*, 1998). Finally, political parties were unbanned and political prisoners released. This led to the first democratic elections in 1994 (Rakodi, 2007). In order to make democracy a reality, the provision of water and sanitation to all people was placed high on the political agenda (DWAF, 2002). Provision was to be based on the “principles of equity and sustainability” (MacKay, 2003:52). Equity received priority.

A fundamental issue was to ensure that all South Africans had “access to essential basic water supply and sanitation services at a cost which was affordable both to the households and country as a whole” (Earle *et al*, 2005:13). For its part, the DWAF (1994:3) also acknowledged that equity was fundamental and it argued that the line that divided those with adequate access to water from those without was the same dividing the “rich from the poor, the hungry from the well fed, the line of race and privilege”.

This period saw the compilation of the White Paper on Water Supply and Sanitation Policy (DWAF, 1994). This paper was drawn up in the context of the absence of a coherent policy for water supply and sanitation (Bayliss, 2002). A range of legislative provisions was drafted to transform local government, which would assume the responsibility of providing water and sanitation services (Robbins, 2005). The White Paper asserted that development should be demand-driven and community-based; that basic services are a human right; that water has an economic value; that the user pays and that local governments should provide water and sanitation services to their residents.<sup>6</sup> According to the 1997 White Paper on the National Water Policy for South Africa, the government was meant to “take the necessary legislative measures, within its available resources, to progressively achieve the constitutional mandate of supplying water and sanitation services” (1997:8).

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<sup>5</sup>These are systems of conduits used to remove and carry sewage (human liquid waste) and to provide drainage (DWAF, 2002).

<sup>6</sup> See <http://www.dwaf.gov.za/documents/policies/WSSP.pdf> accessed on 3/11/2007.

### 1.1.3 The Period 2001 to the Present

Since 1994 considerable progress has been made in addressing under-servicing (Robbins, 2005). Local government has been extensively restructured to meet these challenges and fulfil the stated developmental mandate (Bayliss, 2002). However, demand for the expansion of municipal infrastructure continued to exceed supply, leading to rising backlogs in some services and limited progress in the elimination of backlogs (DWAF, 2002).

At the beginning of this period (2001) the national backlog of persons without access to adequate water and sanitation services was estimated to be 18 million or three million households (DWAF, 2002). The majority of persons falling in this category live in rural areas, peri-urban areas and informal settlement areas (*ibid*). It is also estimated that up to 26 percent of households in urban areas and 76 percent of rural households have inadequate sanitation. This backlog was reduced during the next year (2002) by 2.4 million persons (*ibid*). The National Sanitation Programme, an initiative of the Department of Water Affairs and Forestry, aims to eradicate the backlogs in the rural, peri-urban and informal settlement areas by the year 2010. In addition, eradication of the bucket system (currently estimated at about 428 000 households) is aimed to be achieved by 2007 (DWAF, 2002).

Previously under-developed areas have now been incorporated into metro cities, which have extremely high standards of living and full conventional reticulated water supply and sewerage systems. Addressing imbalances has been identified as a major challenge (eThekweni Municipality, 2005). The eThekweni Municipality has entered into two project agreements with private sector firms, in order to carry out research into and the development of arrangements to provide water and sanitation services to the poor (eThekweni Municipality, 2006).

While the South African government has made strides in improving the provision of water and sanitation services, many obstacles still stand in the way. These include inadequate public participation in water and sanitation issues (Naidoo and Mosdell, 2004). Consumers' experience with respect to services rendered, how adequate they are and the problems encountered in the process, are critical to improving service delivery.

The importance of ensuring a meaningful public participation in water issues has been documented in detail by Dungumaro and Madulu (2003). They cite the advantages gained by public participation, which include the sustainability of water projects. The inequities that exist in service provision in urban settlements are well-known and documented (Vargas, 2002) and these pose a formidable challenge to improving water supply and sanitation services. There is also a growing

recognition that government at all levels must act on this imperative (Inocencio, 2006).

Recent studies have re-emphasized the need for adequate water supply and sanitation service provision in areas where such services were non-existent or poorly covered under apartheid (Pithouse, 2006; Robbins, 2005; Hemson, 2004; Morris, 1991). Smith (2003) points out that under apartheid Black South Africans received inferior and inequitable services or no services. The emergence of the new South African democracy in 1994 brought with it expectations of equalization across racial, gender, socio-economic and geographic boundaries. It also included fair and just delivery of services as well as access to basic services, with the hope that all citizens could own their freedom and dignity. This objective was central in South Africa's RDP, which was translated into national legal obligations, including the 1996 Constitution that states, "*everyone has the right to have access to sufficient... water*" (Republic of South Africa (RSA), 1996). As a starting point for the realization of this constitutional objective, it is essential to explore people's perceptions and attitudes towards the delivery of water supply and sanitation.

## **1.2 DEFINITIONS OF TERMS**

Various terms have been used in this present study.

The term 'consumer' is used in a broad sense to mean both individual customers and communities as consumers of water and sanitation services (Dorrian, 2007). In the same vein, the phrase 'customer service' is used in a narrow sense to imply water services viewed as an economic service, where water is seen as a 'product to be traded' (Naidoo and Mosdell, 2004). In this study 'reliability', refers to a consistent and steady supply of water, while 'quantity' refers to considerable amounts of water provided to consumers daily by a particular utility, in this case the EWS (Raju *et al*, 2006). 'Quality' refers to the water, which is being supplied to consumers meeting the required standards set by the South African Bureau of Standards (SABS). "Adequacy" refers to people's opinion that the availability of water is sufficient (Raju *et al*, 2006). Lastly, "supply-driven" approach refers to a top-down approach where the government as the principal agent, assumes it knows what the people want, and it gives them, irrespective of the actual demand (Franceys, 2008). It has also been referred to as "predict and provide" approach (WSP, 2000). Demand-driven approach refers to an approach that "allows demands of the consumers as individuals and as a community to guide key investment decisions" (Mulenga and Fawcett, 2000:1).

### **1.3 STATEMENT OF THE PROBLEM**

Developing countries are faced with the challenge of providing adequate water and sanitation for all their people (Dungumaro, 2007). The United Nations has set a goal to halve the proportion of people without sustainable access to water and basic sanitation by 2015 (Merrett, 2007). In many developing countries, including South Africa, millions of people do not have access to water and sanitation services. The inadequate provision of water and sanitation has an adverse impact on the health of the people and the economy of these countries (Hrudey and Hrudey, 2004). Countries have taken steps to ensure that people have an adequate supply of water and basic sanitation. However, this goal is far from being realized. A number of factors contribute to the failure to realize this goal. One of these is inadequate involvement and understanding of the consumer perceptions of the services rendered (Dorrian, 2007). This study sought to establish consumer perceptions of customer service quality in the context of water supply and sanitation services in Ohlange Township, Inanda.

### **1.4 THE RATIONALE OF THE STUDY**

The provision of water and sanitation services is critical to the economic and social wellbeing of any nation. In South Africa, the central government is both the custodian and supplier of the country's water and sanitation services, a responsibility tasked to the national Department of Water Affairs and Forestry. In terms of the Constitution, the responsibility for the supply of water and sanitation services to citizens belongs to local government since it is the sphere of government closest to the people. Whilst local government has this responsibility of supplying water and sanitation services it is the central government's responsibility to ensure that this happens in terms of the norms and standards described in its policies.

The provision of water and sanitation services is largely supply (government)-driven. Everything is centrally-planned, with an assumption that the government "knows what the people want and provides for them irrespective of actual demand" (Franceys, 2008: 264). Therefore, the supply-led delivery system exists to provide as many people as possible with basic services. However, in recent times there have been growing concerns and dissatisfaction among citizens with regards to the pace and quality of the services provided by the local government (Naidoo and Mosdell, 2004). This underlines the need to investigate consumer perceptions. Members of the public are the end users of these services. Gaining an understanding of their perceptions provides critical information, which could be used to improve delivery of these services. This information is a developmental asset and can be used for making appropriate interventions. In addition to a better customer response, citizens

become more empowered since they engage the local government in service provision. Water availability and sanitation services are still poor in many parts of the eThekweni Municipality. One of the ways of improving delivery of water and sanitation services is by examining and understanding consumer needs and making appropriate responses to those needs. The findings of this study will be used to make recommendations that could assist in an effective and efficient delivery of water and sanitation services in the eThekweni Municipality.

## **1.5 OBJECTIVES OF THE STUDY**

### **Objective 1**

To investigate consumer perceptions of water supply and sanitation services provided by the eThekweni Municipality.

### **Objective 2**

To investigate the extent to which Ohlange residents are involved in the delivery process of water supply and sanitation services.

### **Objective 3**

To investigate the state of water supply and sanitation services in Ohlange Township.

## **1.6 ORGANIZATION OF THE STUDY**

### **1.6.1 Chapter One: Context and Background**

This chapter discusses the context and the background of the study. It presents the research problem, rationale and the objectives of the study.

### **1.6.2 Chapter Two: Literature Review**

This chapter reviews related literature on the topic, which includes research reports and publications. It also reviews literature on consumer perceptions and other related aspects of consumer service.

### **1.6.3 Chapter Three: Methodology**

This chapter focuses on the study's research design and methodology. It discusses in detail the process followed to collect the data for this study, the research techniques applied, the process of analysis and the methods applied as well as the limitations that were encountered during the data collection period.

### **1.6.4 Chapter Four: Findings and Discussion**

This chapter presents the findings of the study. Both quantitative and qualitative methods were applied in the analysis of the data collected and the findings reported accordingly.

### **1.6.5 Chapter Five: Conclusion and Recommendations**

This chapter summarizes the key findings of the study and suggests recommendations based on the findings.

## CHAPTER TWO: LITERATURE REVIEW

### 2.1 INTRODUCTION

A safe water supply and adequate sanitation is a pre-requisite for any populace (Kibata, 2000). In the developing world, it is estimated that 1.1 billion people have no access to safe drinking water, 2.6 billion people have no access to proper sanitation and more than five million people die from water-related diseases each year (Otieno, 2007; Gleick, 1998). This is 10 times the average number of people killed in wars each year (Otieno, 2007). According to the 2006 Human Development Report, the world water and sanitation situation calls for urgent attention from all governments (UNDP, 2006). The failure of the international aid community, nations and other development agencies to satisfy these basic human needs has led to substantial, unnecessary and preventable human suffering (Water Policy, 2007). The majority of those affected are the poor (Pearson *et al*, 2002). Improving water supply and sanitation services to the poor not only improves their social and economic conditions, but also improves the health of the community in general (Davis *et al*, 1993). Without clean water, not only will public health suffer, agricultural and industrial activities will also be disrupted, leading to the disintegration of societies (Otieno, 2007).

This implies that governments and international and local development agencies should provide significant resources to improve water supply and sanitation services among the poor (Robbins, 2005). A number of empirical studies have discussed in great detail the water and sanitation situation in the world (Heines *et al*, 2004; Downs *et al*, 2002; Alaerts *et al*, 1999; Gleick, 1998; Briscoe, 1995). However, there is a lack of empirical information regarding consumers' perceptions (Naidoo and Mosdell, 2004). This is partly related to the fact that water utilities often lack the capacity to provide quality services and partly because the concept of 'customer service' is relatively new in this sector (*ibid*). There is insufficient understanding of what customer service involves and a lack of information on this topic (Bryne, 2002).

However, this concept is of critical importance in the context of improving basic service delivery because it embraces certain fundamental tenets, which are useful for improving the overall efficiency of water utilities. These principles include listening to consumers' views and taking account of them in making decisions about what services should be provided; treating them with consideration and respect; making sure that the promised level and quality of service is always of the highest standard; and lastly, responding swiftly and sympathetically when standards of service fall below the promised standard (DPSA, 1997). In the context of water and sanitation services, this concept also makes it easier for consumers to do business with the water service providers. Cant *et al* (2006) further contend that the concept not only builds loyalty and long-term financial

sustainability, it also reduces operational costs by assisting in planning and designing services that are in line with the needs of its varied customers. It also leads to increased satisfaction, improved understanding and retention of customers in the long run (Naidoo & Mosdell, 2004). With this in mind, water utilities must identify a range of information that will be required in order to develop appropriate measures that are targeted to meet the needs of their consumers satisfactorily. It is worth noting that consumer satisfaction is a function of perceived performance and expectations from a water service provider by the consumer (Kotler, 1997). This explains the importance of conducting regular consumer satisfaction assessments in order to match the quality of the services provided with the changing tastes and preferences of the consumers. As far as sanitation is concerned, quality of service is primarily about response times to complaints (DWAF, 2001).

The challenge and the onus of providing quality water and sanitation services lies with the service providers, who must understand their customers' needs. This is another reason for conducting consumer satisfaction assessment exercises regularly; for they allow the consumers to express their needs and any difficulties they may be experiencing. This feedback mechanism is important for improving services. This form of participation also empowers consumers. Local authorities become more accountable to the citizens, who in turn become empowered in asserting their interests as far as information access and involvement in basic service delivery are concerned. This notion of participation of communities as consumers also obligates the state or the local authority to provide an environment that makes the bottom-up definition of development objectives, including the provision of basic services possible (Rosemann, 2005). Furthermore, governance at the local authority level becomes more efficient and increasingly responsive to and interactive with communities (Osmani, 2001). In turn, the local authority provides its services increasingly in response to communities' demands and priorities (Blackburn, 2000). This phenomenon is likely to deepen the notion of democracy at the local level, providing a positive link between the local authority and communities as consumers of public goods such as water and sanitation (Oyugi, 2000). However, even though empirical evidence suggests that increased participation and accountability results in enhanced local governance<sup>7</sup>, the challenge remains to identify the conditions under which increased participation promotes equity, quality and efficiency (Robinson, 2003; Blair, 2000; Manor, 1999). This is critically important especially when the provision of basic services such as water is perceived as "a right and an entitlement" (Salman and McInerney-Lankford, 2004: 66).<sup>8</sup>

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<sup>7</sup> In this study, local governance means governing at the local level viewed broadly to include not only the machinery of government, but also the community at-large and its interaction with local authorities (Blackburn, 2000: 7).

<sup>8</sup> McCaffrey (2004) argues that by recognizing the access to safe and affordable water and adequate sanitation as a human right to water, decision-makers whose decisions have an impact on the access and accessibility of water, are responsible for meeting this need to the best of their ability.

This chapter is set out as follows:

The first section provides a broad overview of the global water and sanitation situation. Issues concerning water supply and sanitation are discussed in detail.

The second section presents a brief review of literature concerning consumer perceptions. Empirical studies have shown that consumers are knowledgeable when it comes to service utilization and hence their views are critically important in enabling quality service provision (Naidoo and Mosdell, 2004; Schoeman and Magongoa, 2004; WRC, 2001; Tomlinson, 2001).

The third section presents the history of water supply and sanitation in South Africa, followed by a brief description of the policy, legislative and institutional framework in the sector.

The fourth section presents a brief description of water supply and sanitation in the eThekweni municipality. The Municipality's water supply and sanitation policy and objectives are presented.

The fifth section concludes the chapter by summarising the key issues discussed.

## **2.2 THE GLOBAL WATER AND SANITATION CRISIS**

Water is a natural resource, a critical commodity, without which humans cannot survive (Gandidzanwa, 2007). It is critically important for the processes that sustain human needs and activities, especially in attaining socio-economic development goals (Dungumaro, 2007).

Across the globe, the demand for water is sharply on the increase due to rapid population growth as well as rapid growth in agricultural, industrial and urban development (Otieno, 2007). All too often, however, water is treated as an infinite free good, rather than as the precious resource that it is. Where supplies are plentiful, the risks of pollution and rising demand are increasing. If water management and sanitation are not given priority, the world may be faced with a bleak future (UNWWAP, 2003) - a future characterised by severe water shortages and a polluted environment (Okun, 2005). The United Nations (UN) has predicted that up to seven billion people in more than 60 countries may face water scarcity by the year 2050 (Otieno, 2007).

This scenario is further aggravated by the ever-increasing levels of pollution of available fresh water resources (*ibid*). The World Commission on Environment and Development (2007) estimates

that approximately two million tons of waste<sup>9</sup> is placed in receiving water channels daily. This is partly as a result of rapid human population growth, and also the consequence of increased economic activity in urban areas (Banes *et al*, 1996). This trend seems likely to continue in the next few decades given the increasing quest by developing countries to industrialize and actively participate in the global economy (Popat, 2003).

When water provision and availability is inadequate, people are forced to use insufficient and contaminated water (Dungumaro, (2007). This results in water-related diseases. In its 2005 Report, the World Health Organization (WHO) notes that nearly 250 million cases of preventable water-related diseases are reported every year, while approximately three million lives are lost annually from water-related diseases.<sup>10</sup> It adds that millions of children are left physically and mentally impaired, underweight, vulnerable to diseases and generally in a very poor state of health as a result (Dowdeswell, 1998).

It is estimated that by the year 2025, the world's population will be 7.8 billion, of which 4.5 billion will be in urban areas (UNFPA, 2006). Van Damme (2001) notes that since universal water supply and sanitation coverage by 2015 is now a widely acknowledged goal, this means that in urban areas an additional 1.9 billion people will need a water supply and 2.1 billion will need sanitation services.

The UNDP (2002) has called on governments, and international and local development agencies to act urgently and proactively to address this situation. Effective waste management methods need to be adopted to reduce pollution levels. Public education on the importance of water conservation would encourage people to use water in more efficient ways (Linn, 1982). Failure to implement such measures might mean that the Millennium Development Goals (MDGs),<sup>11</sup> especially with regards to water supply and sanitation might not be attainable.

If the importance of safe water and adequate sanitation is recognized both nationally and internationally, why are improvements in water supply and sanitation so slow? Why do some countries succeed in promoting the need to provide safe water and adequate sanitation, while others do not? In most of Africa, Latin America and Asia, people still do not have access to a safe and adequate water supply and sanitation (DFID, 2004; Gleick, 2000). Research has shown that the importance poor people place on cleaner water and better sanitation does not always result in action by governments (DFID, 2004; UNDP, 2002). Water supply and sanitation are given low priority in

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<sup>9</sup> This includes industrial waste, chemicals, human and agricultural waste.

<sup>10</sup> Of the 3 million deaths, approximately 2 million are young children from developing countries (HSRC,2002).

<sup>11</sup> Cited from DFID policy paper, 2004.

the national budgets of many governments (DFID, 2004). The challenge therefore is to encourage national governments to include water supply and sanitation in their national budgets and also to ensure that the political momentum generated by the MDGs leads to action on the ground (Short, 2002; Cain *et al* 2002).

Concerted efforts are needed to encourage national governments to make the effort to understand the demands of the poorest people in their societies and to ensure that these demands are reflected in their policies and in their budget allocations. Research has shown that poor people consistently rate a better water supply and sanitation as one of their highest priorities (Cain *et al*, 2002). Governments need to design and implement policies that improve the provision of clean water and an adequate supply for low-income households (Patel, 2004). This will also involve creating an enabling system of governance.

The next section briefly reviews consumer perceptions in relation to water supply and sanitation.

## **2.3 CONSUMER PERCEPTIONS IN WATER SUPPLY AND SANITATION**

### **2.3.1 Theoretical Approaches Explaining Consumer Perceptions in Water Supply and Sanitation**

Adequate provision and access to clean water and sanitation is beneficial both to the economic growth of a nation and the health of its citizens (Dungumaro, 2007). As consumers of these services, citizens have become increasingly instrumental in shaping policy and service delivery. This is because they are experts on what it feels like to use a particular service (NCC, 2007). Many of the current systems of provision of water supply and sanitation in most countries (both developed and developing), are supply-driven (Saywell and Cotton, 2002). This means that the approach to providing these services is a 'top-down'. It is primarily government-driven, where the government decides what the people need and goes ahead to provide it.

Consumers rarely contribute to these decisions and are therefore not in control of what is being offered. As Rakodi (2000) notes, the government sets the policy goals, allocates the necessary resources, secures the services of a government agency, and then delivers the service. This approach has been described as inefficient, resulting in wasteful investment that achieves neither basic needs, nor equity goals and operational sustainability (*ibid*). Critics of public-sector provision argue that even though urban water supply has features that may lead to market failure, water is a private good

(Kessides, 1993; Fox, 1994). This implies that water can be both “rivalrous” (there is less available for another person because one is consuming it) and “excludable” (it can be provided for one person without being available for everybody) (Rakodi, 2000: 367). This argument generates the view that it is right to charge consumers (users) and to exclude non-payers, when water is provided through the market.

The demand-driven approach is the opposite of supply-driven approach (Balogun, 1998; Saywell and Cotton, 2002). In this approach, service provision is guided by what the consumers’ needs are (Raju et al, 2006). Consumers also have a choice about whether or not to consume water (Fox, 1994). However, this approach may be constrained by poor people not having enough purchasing power to gain access to water and improved sanitation, note Guy & Haller (2004). Even though this may be the case, this approach allows consumers to voice their concerns and complaints. It is consumer-friendly, and enhances the accountability of the service providers (Jolly, 2002).

These two approaches suggest that a principal-agent relationship exists between the consumers and the service providers. It is clear that the services that consumers have become accustomed to have a significant influence on their expectations and their attitudes towards service providers. It is therefore feasible to argue that the supply and demand-driven approaches in urban water supply reflect the contractual relationships that exist in service provision. On the one hand, consumers have an entitlement to basic services. On the other, governments have a moral and political responsibility to provide basic services. However, consumers’ willingness to honour this contractual relationship, regardless of the approach followed, depends on the delivery of services, which are perceived by them to offer “value for money,” (Rakodi, 2000: 386).

### **2.3.2 Consumer Perceptions Examined**

#### **2.3.2.1 Who is a Consumer?**

According to Cant and Brink (2006), a consumer is anyone who directly experiences services. This also includes ‘potential customers’, people who could use a service but don’t. Consumers are dynamic individuals whose tastes, preferences and choices change from time to time. It is for this reason that all sectors and institutions must not only study their markets but also their consumers’ changing needs and perceptions. Peter and Oslo (2007) argue that institutions must constantly conduct customer surveys in order to gain understanding of their behaviour and needs. Failure to do so results in frustration. Consumers become dissatisfied with the services they are receiving, while the service provider overextends itself or misdirects its efforts (Solomon, 1996).

The world is overflowing with countless sensations. People are bombarded with colours, sounds and odours. As members of a global community, people are never far from product packages, advertisements, billboards, and radio and television commercials, all clamouring for their attention. All these sensations affect the way people define their world and how they interpret their meaning in order to respond to them.

Perception can be defined as the process by which people select, organise and interpret stimuli, paying attention to them and giving them meaning in order to respond appropriately (Plessis *et al*, 2003; Peter *et al*, 2007; Schiffman *et al*, 2007). It is the process by which “individuals become aware of the environment and interprets it so that it will be congruent with their own frame of reference” (Cant *et al*, 2006: 193). The process of perception with regards to water supply and sanitation is subjective (Guy and Haller, 2004). Cant *et al* (2006) noted that consumers’ perceptions are subjective because they are influenced by their uniqueness as people, biases and needs.

### **2.3.2.2 Consumer Perceptions and Service Delivery**

As noted above, consumers are continuously making decisions about what products and services to consume. They make these decisions in order to satisfy their needs and desires. Consumer behaviour is largely triggered by needs and services, often in an attempt to remove a state of tension caused by a particular need. Ariely (2000) argues that a problem occurs only when consumers perceive a difference between their present situation and what they want.

It is this unfulfilled need, which creates a state of tension that must be eliminated by the fulfilment of that need (Cant *et al*, 2006). As far as service delivery is concerned, consumers will often agitate when these tensions between what they are experiencing at present and what they should have are not addressed. Problem recognition in service delivery is thus an awareness of the need to change the existing state to conform to the desired or ideal state (Kasper, 1988). It is predominantly a perceptual phenomenon (Cohen *et al*, 1990). It is the difference between the existing and desired state of affairs that triggers a particular type of behaviour such as riots and other forms of unrest. These problems are exacerbated by the fact that consumers are never involved in the decision-making processes. In most cases, the outcome of non-involvement is dissatisfaction (Cant *et al*, 2006).

Too often in the past, planning for water and sanitation services occurred without fully understanding the needs of the service beneficiaries themselves. Mulenga & Fawcett (2000) argue

that this has always led to the failure of supply-driven approaches that do not take into account the expressed needs of the users. According to Hogrewe *et al* (2003) this phenomenon is as a result of institutions structured to provide services in a supply-driven manner. It is for this reason that institutions and organizations ought to conduct periodic consumer surveys and ensure that their services meet the expectations of their clients. Gaining such insights enables organizations to effectively deliver quality services as well as making informed interventions where they are lacking. It also enables proper communication between service providers and consumers. This in turn heightens the consumers' confidence in the services and products that they are receiving.

Cant *et al* (2006) claim that understanding changing consumer preferences enhances service delivery. Any responsible utility that is serious about its customers attempts to keep them satisfied. Research conducted elsewhere suggests that there are a number of important reasons why water services institutions ought to integrate customer relations into their broader business strategy (Coats & Sansom, 2001; Naver and Slater, 1994; Cook, 1994). These include:

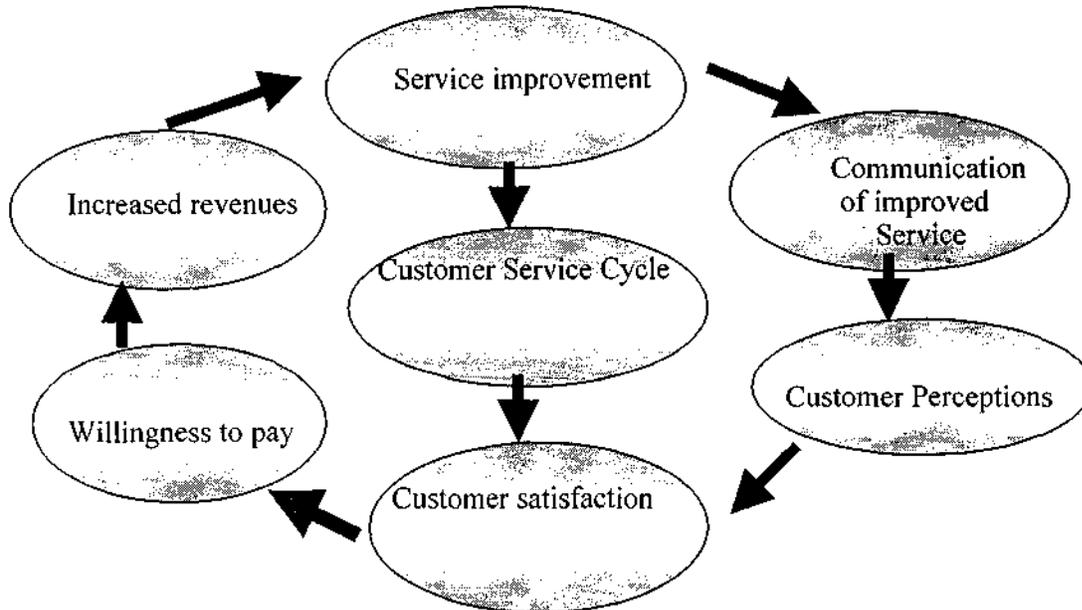
- increased customer satisfaction;
- improved profitability, to allow for expansion of service coverage;
- improve the corporate image in the eyes of the customers;
- minimise customers' sensitivity to prices of water and sanitation services;
- maximise the number of customers who will "sell" the organisation through word-of-mouth communication;
- develop internal customer/supplier relations;
- enhance its reputation as a good employer;
- ensure products and services are delivered promptly;
- improve staff morale;
- increase productivity;
- reduce costs;
- encourage employee participation;
- bring about continuous improvements in the operation of the company (Naidoo and Mosdell, 2004: 11).

It has been noted that satisfied consumers become increasingly loyal to the service provider. This creates a ripple effect in the utility's revenue collection (Naidoo and Mosdell, 2004). Customer satisfaction is demonstrated in the following ways (Naidoo and Mosdell, 2004: 11):

- Willingness to pay for services, leading to increased revenue for the utility;
- Increased business dealings with the utility – customers may be more inclined to apply for

- additional services or increase their consumption of existing services;
- Word-of-mouth recommendations attract potential new customers, thereby increasing revenue.

### Consumer Satisfaction/Revenue Cycle



(Cited in Naidoo and Mosdell 2004:14)

This cycle demonstrates a perfect scenario when each of the parts functions as expected. However, in some instances the cycle can be broken. For instance, lack of communication can lead to serious problems such as non-payment of accounts or delayed billing. The chain is as strong as its weakest link, each part complementing the other. Since every action in the cycle is interconnected, utilities should take cognisance of these synergistic effects that impact on their ability to provide superior service to their customers. They should also recognize that each of the above actions in the chain adds value to the overall quality of service that a utility renders to its customers. This in turn influences consumer expectations of the services they expect from the utility. It is these expectations that should serve as guidelines for creating and sustaining consumer satisfaction (Dorrian, 2007).

The following section discusses in detail water supply and sanitation services in South Africa.

## **2.4 WATER SUPPLIES AND SANITATION SERVICES IN SOUTH AFRICA**

### **2.4.1 Brief History of Water and Sanitation Supply in South Africa**

The scale of water and sanitation provision has been hailed as a great achievement of the African National Congress (ANC)-led government. Since 1994 the new government has embarked on a plan to equitably supply water to all people, irrespective of their socio-economic condition (Alcock, 1999). These intentions were written into the Reconstruction and Development Programme (RDP). One of the RDP's main objectives was to attain not only economic growth but also equity in basic service delivery (Morris, 1999).

Historically, the apartheid government provided water and sanitation services disproportionately across the racial divide (Abrams, 1996). It initiated vast water schemes during the second half of the 20<sup>th</sup> century, mainly for irrigation purposes. The primary user of water in those early years was agriculture (Abrams, 1996). The policy functions of the Department of Water Affairs and Forestry (DWAF) prior to the 1994 elections were constrained exclusively to water resource management (*ibid*). The Department did not regard itself as responsible for ensuring that South Africans had access to water and had no political mandate for such responsibility (DWAF, 1994).

As a consequence of apartheid separate development policies, the country was divided into independent homelands (Morris, 1999). The DWAF had no jurisdiction in these areas (Abrams, 1996). More than 87 percent of the population lived in these areas and subsisted on 13 percent of the land (Coning, 2006). Ninety five percent of water resources were used by industrial farmers who were mostly White, leaving only five percent for small-scale Black farmers (Van Koppen, 2002). Mobility outside homelands and entrance into white neighbourhoods was restricted for Black South Africans because of the way residential neighbourhoods were organized (Mazengia, 2004).

Although the homelands were abolished in 1998, segregation in terms of service delivery still persists (*ibid*). This is because low-income housing was built in the homelands in order to “preserve” the residential character of predominantly White neighbourhoods and to ensure that “high densities do not cause depreciation of adjoining properties” (Cashdan, 2000: 4-5).

The consequences of the apartheid government's separate development policies were far reaching. It was estimated that 12 to 14 million people were without any formal water supply while 21 million people had no basic sanitation (Mazengia, 2004). Without formal services of known capacity and reliability, and without responsible and capable authorities, communities in these hinterlands were left to fend for themselves (DWAF, 2002a). This phenomenon had two-fold

consequences: it facilitated the growth of poverty, especially in rural areas, and increased urban migration (Abrams, 1996).

As a result of the fragmented nature of South African society, and a noted absence of an institutional framework, as well as a lack of clear guidelines, strategies, support structures or common policy to address the vast needs of South Africans, the challenges that lay ahead were enormous ( Hemson, 2004; Robbins, 2005). Where these services were provided, they were often in a bad state of disrepair (DWAF, 2002). Those who had inadequate sanitation, for example, were forced to continue using the bucket system, rudimentary pit toilets or the veld (Hemson, 2004).

The disproportionate provision of basic services was reflected in the different Human Development Indices (HDIs) between White and Black South Africans (Mazengia, 2004). The HDI of White South Africans in 1995 was 0.92, which was the same as that of developed countries like Canada compared to an HDI of 0.67 for black South Africans (UNDP, 2003).

Since 1994, the ANC-led government has made commitments to provide services and improve access to resources (State of the Nation, 2006). One of the recovery actions taken by the government was the management and provision of water services (Van Koppen, 2002). In 1996, the South African Constitution was ratified; specifically stating that water is a basic right (Abrams, 1996). This provision was contained in the Bill of Rights in the Constitution of the Republic, which stated that “everyone has the right to have access to sufficient food and water” and stipulated that “the state must take reasonable legislative and other measures, within its available resources, to achieve the progressive realization of these rights” (South Africa, 1996). In addition, the Water Services Act of 1997 set the standard of quantity and quality of water and sanitation services South Africans were guaranteed to receive and identified the institutions that would be responsible to carry out those tasks (South Africa, 1997).

In 1998, the National Water Act was ratified. Throughout the Act, “redress the results of past racial and gender discrimination” is mentioned as the main reason for reforming the management and provision of water resources (South Africa, 1998). By ensuring equitable allocation of natural resources to all South Africans, the water policy was seen as a necessary part of the government's economic development programme (Goldblatt and Davis, 2002).

Since South Africa is a water scarce country, this policy was also intended to conserve water (Bond, 2001). Empirical studies indicate that half of the rainfall in South Africa falls on only 13 percent of the land, located in the South-eastern part of the country, while half of the country's land only

receives a quarter of the rainfall (Mazengia, 2004). In addition, since South Africa has very little groundwater or lakes, it relies heavily on fresh water from rivers and streams (*ibid*). Due to rapid population growth, increased usage of irrigation for agriculture, as well as high rates of evaporation, the amount of water available to be distributed to consumers is critically insufficient. Allan (2003) calculates that South Africa has 1 110m cubics of water available per person compared to an average of 7 045m cubics per person globally.

The South African government chose to control the provision of water and sanitation in order to ensure equitable provision takes place (Schreiner and Naidoo, 2000). The government also had to ensure that previously marginalised people, including the poor, would participate in the management of the country's water resources (*ibid*). Local government was seen as the ideal agent for the provision of water services in order to ensure the promotion of social stability (South Africa, 2005). Furthermore, the government made a commitment to provide 25 litres of free water per person per day, which amounted to about 6 000 litres per household per month. This was to ensure that poor people received the WHO recommended minimum amount of water to maintain their well-being (Mazengia, 2004). The system of provision that the government chose ensured that water required to meet basic human needs would be provided, while requiring people to pay for additional consumption at a rate which reflects its value and scarcity (Reed and de Wit, 2003).

The following section briefly focuses on the institutional arrangements available to facilitate the government's water policy.

#### **2.4.2 Institutional Arrangements and Implementation Strategy**

Since 1994 the South African government has made considerable progress in ensuring that every citizen has access to clean water and basic sanitation. As discussed earlier, given the unique political history of the country, there are some areas where water and sanitation services are remotely provided (Dungumaro, 2007)<sup>12</sup>. In some of the poorer areas, water services are poor, and so is the infrastructure, which is inadequate, or nonexistent (Otieno & Ochieng, 2006). This is a considerable challenge to the DWAF. In 1998, with the establishment of the new water legislation and the abolishment of homelands, the DWAF assumed responsibility for managing the country's water resources and for guaranteeing that all citizens had access to water.

This Department was also tasked with the responsibility for formulating policies pertaining to national water usage (Mazengia, 2004). However, besides the DWAF as the main agency for water

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<sup>12</sup> Currently 15.7 million people have no basic water supply while 18 million have no basic sanitation (DWAF, 2006).

provision, other district and sub-district level water organizations<sup>13</sup> were established to deal with residential and industrial users (James, 2003). These institutions were endowed with the authority to regulate how water was to be provided and who should provide it. Although the DWAF is the primary custodian of water resources, the provision of water services was decentralized to the municipal level, and consequently local governments were given the mandate to self-finance while ensuring that “basic human water needs” for the poor were met (Van Koppen, 2002). This model of service delivery was based on the assumption that because local authorities are elected by consumers, they would be obligated to cater for the needs of their constituency (South Africa, 2001a).

Municipal governments have also been given the power to determine how to distribute water services as well as set user fees within areas of their jurisdiction (Pollard & Toit, 2005). Although local governments receive detailed guidelines with options as to how to implement the free basic water service, they are given the discretion to make decisions that best serve the interests of their residents as long as they do not violate any national laws (Mazengia, 2004; South Africa, 2001a). According to Cashdan (2000), it was argued that decentralization would lead to the efficient provision of these services by ensuring that they are financially sustainable because the pricing system would enable local authorities to be self-sufficient. This would be done through raising taxes as well as providing services for reasonable profit from wealthy residents (*ibid*).

The DWAF is tasked with the responsibility of endorsing the use of communal taps and low-pressure tanks with measuring meters as well as conventional house connections with prepaid metering to charge for additional water consumption (South Africa, 2001b). This is in line with the government's primary objective of providing free water to meet basic needs, which required designing a mechanism to measure and control the amount of water that is supplied free of charge. In order to ensure the provision of free water, the Department designed three cost recovery measures: the rising block tariff, targeted subsidies and service level targeting (Mazengia, 2004).

The rising block tariff targets high and middle-income households, and is meant to cross-subsidize low-income households within the municipal government's jurisdiction. The subsidies targeting approach is supposed to be used in those municipalities whose residents are predominantly poor. When these poor are identified, they will receive a full subsidy (South Africa, 2001b). Service level targeting is meant to be used by municipalities that have poor capacity and whose consumers are mostly poor in order to provide them with the required amount of basic water needs (*ibid*).

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<sup>13</sup> These institutions include district and rural councils, community-based organizations and water boards.

It is important to note that the financing of free basic water requires municipalities to utilize internal and external sources of funding. This implies that municipalities must liaise with other stakeholders, local and foreign, to encourage them to donate funds to sustain such initiatives.<sup>14</sup> As far as external funding is concerned, local authorities can use the “equitable share” transfers and conditional grants they receive from the central government to subsidize water services for the poor (Mase, 2003). Mazengia (2004) notes that the central government distributes the “equitable share” to provinces and municipalities based on a formula that takes into account household *per capita* income. This formula is meant to create equal allocation of resources in the provision of services. The government perceives this model as an important and necessary step in its efforts to correct the racial disparities of the past (South Africa, 2001b).

The Department acknowledges that the level of cross-subsidization local authorities can utilize depends on the ratio between wealthy and low-income consumers as well as that between industrial and domestic consumers (South Africa, 2001b). Local authorities are given the mandate to seek and gather appropriate and adequate information in order to determine the appropriate cost-recovery and control mechanisms (*ibid*). Finally, local authorities are discouraged by the DWAF from charging high prices to industrial consumers (Mazengia, 2004). The argument behind this policy position is the belief that in order to encourage and strengthen local economic development, it is critically important to keep the input costs of businesses as low as possible while ensuring that they pay the full cost of the water they consume (*ibid*). The local authorities are encouraged to use the “equitable share” transfer they receive from the national government to provide free basic water to low-income households within their jurisdiction (South Africa, 2001b).

In sum, although the South African government has made significant strides with regards to the equitable provision of water supply and sanitation, the challenges are enormous. As indicated at the beginning of this section, most South Africans lacked access to water before the formulation of water policy. This implies that the success witnessed currently is a result of the present water policy and the concerted efforts of the national government and the local municipalities, to ensure that all South Africans have access to water and sanitation. However, there are challenges that need to be addressed and the recent unrest witnessed across the country is a clear indication that communities are not satisfied with the current service delivery pace. The following section briefly discusses the impact of this policy and institutional arrangement on consumers.

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<sup>14</sup> The institutional framework requires a combination of local funds and national grants, but donations from external funders can be sought in exceptional instances.

### 2.4.3 The Impact of Policy on Consumers

As indicated earlier, consumers are well-versed in understanding the services they seek to utilise (NCC, 2007). From the consumer's perspective, the government and the water service providers can gauge the effectiveness of their services and the impact of their policies in delivering those services. This is why examining consumer perceptions on service provision is critically important. Although South Africa has taken steps to address the needs of its low-income citizens, evidence suggests that cost-recovery schemes have made it difficult for users to enjoy sustainable use of water (Huynh, 2004). The UNDP (2000) argues that thousands of water services have been disconnected because of users' inability to pay. The report further claims that the free water project has become dysfunctional or fallen into disrepair (*ibid*). On aggregate, an estimated 12.5 percent of South Africa's population still relies on water from rivers and streams (Mazengia, 2004).

The pricing system has also impacted on consumers differently across the country. McDonald (2002) maintains that the pricing system benefits wealthy suburbanites over low-income township dwellers for the same service. While the government aims to provide all South Africans with water, the discrepancy in this provision as the result of high water prices goes against the very values that the government stands for. Empirical evidence indicates that the majority of low-income dwellers have difficulties in paying for water, claiming that they cannot afford the price (Klasen, 2002).

Klasen (2002) argues further the policy places greater emphasis on economic growth than redistribution. In addition, the cost-recovery mechanisms that were designed by the DWAF, which require the local authorities to implement them, placed a burden of high administrative costs on municipalities, resulting in strained metering, billing and control systems (McDonald, 2002). Empirical studies indicate that the administrative costs of targeting the poor receive the largest proportion of the funds transferred from the national government (South Africa, 2001b). High capital and operating costs per unit of service that are associated with low population densities hinder local authorities' efforts to provide water services to their residents (Mazengia, 2004). On the other hand, where local authorities are able to provide affordable water services to these areas and apply cost-recovery measures, the user fees consumers pay are much higher than urban consumers pay for the same unit of water (McDonald, 2002a). Having access to water does not benefit consumers when they are not able to pay for it (Mazengia, 2004).

Besides organizational bottlenecks, local authorities are faced with additional financial constraints because of their limited resources. Mase (2003) notes that due to these constraints, local authorities find it difficult to deliver basic services at the same standard as they previously provided to wealthy

and privileged citizens. The government has a huge burden on its shoulders to expand subsidized services to the majority Black population which lives in the informal and rural areas of the Republic.

Another concern is the lack of willingness on the part of high-income consumers to subsidize the water consumption of the poor (Mazengia, 2004). Empirical studies indicate that 69 percent of South Africans who earn between R15 000 and R20 000 per month are opposed to paying increased taxes in order to cross-subsidize low-income households (McDonald, 2002a). This has serious implications for government's efforts to eradicate poverty and reallocate resources equitably.

Alence (2002) argues that the water policy failed to take into account the fact that local authorities inherited weak and at times non-existent infrastructure, which required substantial amounts of capital expenditure to replace and upgrade. Current intergovernmental transfers do not adequately cover the needs of the local authorities (Mase, 2003). Residents who rely on free water cannot afford to fix broken facilities. As a result, studies have shown that water services in some areas are interrupted 50 to 90 percent of the time (Wellman, 1999). Closely connected to interruption problems is the lack of payment for services by consumers. This culture of non-payment has been blamed for the lack of maintenance of facilities (Wellman, 1999). But McDonald (2002b) argues that inability to pay is usually the major reason for non-payment.

According to Statistics South Africa (2006), the unemployment rate among Black South Africans is higher than other racial groups.. It is therefore highly likely that inability to pay is related to low income levels among the Black population, the majority of whom live in under-serviced areas. This explains why municipalities face serious difficulties in collecting user payments, especially from low-income families. This phenomenon has severely jeopardized the ability of local authorities to expand and build their infrastructure and capacity (Alence, 2002).

Although water resources are scarce in South Africa, it is argued that South Africa's local governments lack the financial, institutional and managerial resources required to tap these resources in a sustainable manner (James, 2003). The inability to successfully implement water policy in South Africa has impacted on consumers in an unexpected way. The majority of those it sought to deliver the services to are still complaining about these same services 14 years after the advent of democracy.

The challenges posed by institutional arrangements, implementation strategies and internal and external sources of funding continue to hamper South Africa's efforts to deliver basic services

successfully. Although it may seem too early in the history of the South Africa democracy to assess the impact of the water policy on consumers, especially given the legacy of decades of racial discrimination, current trends are not encouraging. If the government does not take serious steps to correct the situation, consumers will be continually dissatisfied. Furthermore, the backlogs in providing water services in urban areas are huge.

In sum, South Africa's water policy has been hailed a success to the extent to which it provided a framework to base water supply in South Africa on. However, it has not been successfully implemented across the country. There are still discrepancies in terms of water supply and sanitation delivery. Consumers around the country have been impacted on differently and the unrest in some provinces is a strong indication of dissatisfaction with basic service delivery. Since the government has decentralised service provision to local authorities, it is of paramount importance to look at how they have implemented the policy. The following section briefly presents the water supply and sanitation situation in the eThekweni Municipality.

## **2.5 WATER SUPPLIES AND SANITATION IN THE ETHEKWINI MUNICIPALITY**

### **2.5.1 The eThekweni Municipality Water Supply Policy and Objectives**

The eThekweni Municipality has an adequate water supply and sanitation infrastructure, although in some areas, the infrastructure is in serious need of repair or upgrade (Cross, 2000). There are also many households, which still do not receive the minimum level of water delivery provided for by the Constitution (Charlton *et al*, 2006).<sup>15</sup> Approximately, 144 600 households, representing 20.4 percent of the total eThekweni Municipality population, receive water below the acceptable minimum. The majority of those who receive this minimum level live in townships and informal settlements. Tremendous efforts have been made since the 1994 elections. However, significant backlogs still exist. At the same time, the Municipality has committed itself to ensuring that water supply services reach even the poorest in the Greater Durban Metropolitan area.

This provision is reflected in the Municipality's water supply policy framework, revolving around four main pillars:

- a) Financial – The Municipality is obliged to devise ways and means to finance water supply, and target this supply of free basic service in a sustainable and efficient manner;

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<sup>15</sup> The minimum level of water delivery for every household is 200 litres per day of potable water (Charlton *et al*,2006)

- b) Institutional – The Municipality is expected to develop the required organizational capacity and working relationships between different institutions;
- c) Technical – The Municipality ought to choose what technologies are appropriate to facilitate free basic water, and that technology must influence service provision;
- d) Socio-political – The Municipality must establish how successful communication and co-operation can be enhanced between consumers, councillors and other spheres of government working together. (Moffett, 2003: 37):

### 2.5.2 Sanitation Services

According to Byerley (2000), the official acceptable minimum level of sanitation provision is a Ventilated Improved Pit latrine where on-site circumstances are suitable; otherwise alternative on-site disposal systems up to full waterborne sanitation should be provided. Approximately 212 000 households, nearly 30 percent of the Municipality's population, live below this official minimum level (Cross, 2000). However these services have been hampered by consistent financial, administrative and technical incapacities (Charlton *et al*, 2006). As a result, some of the areas within the Metropolitan area have sewer systems in serious need of repair and upgrading, especially in the informal settlements (*ibid*).

It is important to note that informal settlements have been on the increase in the city (Bakumeni, 2004). Usually, these informal settlements lack basic infrastructure because settlement-based development initiatives are not planned properly. This limited basic infrastructure has a negative impact on the lives and social behaviour of the residents (*ibid*: 3). However, the city is constrained in its efforts to deliver sanitation services. The majority of the residents are unemployed and are generally poor, and hence are unlikely to find basic services affordable. Dungumaro (2007) found that income is closely linked to affordability of water and sanitation services. In addition, population density in informal settlements is rising rapidly, and changing over time, making it more difficult to provide adequate basic needs. According to the UN Economic and Social Council (2004), inadequate maintenance of pumps and distribution systems, and leakage of water from pipes are some of the major problems experienced in informal settlements.

In a positive initiative to enhance its relationship with its consumers, the eThekweni Municipality embarked on several programmes aimed at not only enhancing customer relations but also improving service delivery. One of the programmes involved developing a customer services charter. The main objective of this charter was to ensure an improvement in the manner in which the Municipality delivered services to its citizens. Included in the charter was a complaint handling mechanism. This empowers consumers to know who to report a matter to. The charter also highlights the responsibilities of consumers. Even though the EWS is bound to offer quality, equitable services, consumers have a responsibility to fulfil their obligation regarding payment for services rendered.

The second programme initiated by the Municipality was the customer perceptions analysis survey. According to Wilson (2007), the EWS recognised the need to establish higher quality relations of trust and dialogue with the communities within its jurisdiction. This survey was done mainly through focus groups, following a firm belief by the department that consumers should know how their needs can and should be met. The survey was based on trust and overall satisfaction, billing, pricing, infrastructure, environment, conflict, health and education as indicators (Wilson, 2007). The specific objectives of the focus groups included (WATSAN, 2008: 31):

- a) Enhancement of the community's consultation and input in the governance and service delivery programmes as provided by the water and sanitation unit;
- b) Development of a better understanding of customers' perceptions about water and sanitation provision to inform improved design and delivery;
- c) Establishment of new and strengthening of existing community partnerships with government.

This survey was piloted in a few areas and has been successful. The Municipality aims to extend it to other areas.

## **2.6 SUMMARY**

This chapter has reviewed literature concerning water supply and sanitation broadly at the international level and has extensively reviewed the global situation. It has established that a significant number of people in the world still lack a clean water supply and adequate sanitation. The literature also established that the majority of these people are in developing countries. This review has also established that concerted efforts are needed both by the international community and national governments, if this situation is to be corrected.

Millions of low-income Black South Africans lack access to clean water and adequate sanitation and this remains a distant dream given the current circumstances. Challenges posed by institutional

arrangements continue to hamper effective delivery of water and sanitation services. The greatest challenge for government is to deliver these basic services and reduce the backlogs that were inherited from the apartheid government. The literature also established that while there is a genuine concern by the government to bring these services to all people without discrimination, there are still a number of instances where discrepancies may be observed. This has led to consumer dissatisfaction, as seen in the recent spate of unrest in some provinces of the country. The literature has established that consumers' views are important and these views can be used to identify gaps in customer service delivery so that the appropriate changes can be made.

## CHAPTER THREE: METHODOLOGY

### 3.1 INTRODUCTION

This chapter describes the study area and methodology that was used in conducting the study. It begins by outlining the characteristics of the study area. The research methods in the collection, processing and analysis of data will also be dealt with. Lastly, limitations and problems experienced during data collection will be briefly described.

### 3.2 CHARACTERISTICS OF THE STUDY AREA

Ohlange Township is situated in Inanda, approximately 30km from the Durban Central Business District (CBD). This Township is a mixture of formal and informal settlements. The predominant form of settlement is informal, with an estimated total number of 37 863 dwelling units (RDP, Urban Renewal Report, (1998). This makes Ohlange Township one of the largest conglomerations of low-income residential areas in South Africa (Khan, 2007). Its population<sup>16</sup> is largely youthful with high unemployment, low levels of education, high levels of poverty and high levels of crime (Khan, 2007). The Township is also plagued by the HIV/AIDS pandemic and increasing numbers of single parents and teenage pregnancy (*ibid*). The Township's dependency ratio is 1:2, 73, while the occupational ratio is five persons per dwelling unit<sup>17</sup>.

OhlangeTownship has an inefficient system of refuse removal, a condition that has created a “generally unhealthy and visually unappealing environment to live {in}” (Makhatini *et al*, 2002:40). Inconsistent refuse collection has led to a situation where the very limited toilets available are used as dump sites. This has led to water spills all over the place, creating an environment that is conducive to mosquitoes and diseases (*ibid*). According to Nicholson (2001), these conditions do not foster a sense of civic pride or caring. This problem has further been compounded by the growing population, causing tremendous pressure on the existing water and sanitation infrastructure in the area. In comparison to other areas in Inanda, this area exhibits fundamental development challenges such as poor housing, poor roads, lack of street lighting, and lack of proper garbage disposal sites to mention just a few.

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<sup>16</sup> The Population Council of South Africa (2005) estimates the population of the township to be approximately 30 000 people, mainly composed of African Blacks.

<sup>17</sup> Dependency ratio is defined as the ratio of the number of persons aged under 14 or over 64 to the number of persons between these ages, while occupational ratio is the number of people who are employed per household (Webb, 2006: 3).

### 3.3 SAMPLING DESIGN

This study adopted a non-probability sampling technique. This technique is adopted when researchers target a particular group and are not always seeking a generalization of findings to the overall population (Somekh & Lewin, 2005). This kind of a technique is mostly applied in small-scale research, particularly when costs need to be minimized, and in qualitative approaches such as ethnography, case studies or action research (Denzin and Lincoln, 1994). Kitzinger *et al* (1999) contend that this technique is appropriate where the researcher can easily access the sample, such as employees in a local company or a group of people. In this case, due to time and costs constraints, this technique was appropriate for the purposes of the study.

However, this technique has its own drawbacks. The major drawback is that the findings cannot be generalized to the whole population (Descombe, 1998; Bauer & Jovchelovitch, 2003; Walliman, 2001; Mantell, 1997; Bernard, 1994). Even though the findings of this study may not be generalized, they could shed a light on what might be happening in similar settings elsewhere. Secondly, there is a risk of bias and the design provides no means of assessing this bias (Greenfield, 2003). Thirdly, in non-probability sampling, unlike probability sampling, it is difficult to estimate sampling error<sup>18</sup> (Mitchell, *et al*, 2005). In order to reduce the risk of bias, the study adopted purposive sampling. According to Litosseliti (2003), purposive sampling is appropriate for small-scale research that focuses on acquiring in-depth information about a particular aspect. This non-probability technique was deemed appropriate as it allowed the researcher to select a sample that was believed to be representative for the purposes of the study. In this case, this technique was utilized in the selection of the communities and household involved in the study.

Snowball sampling was also utilized in conjunction with the purposive sampling technique. In this technique, a small number of individuals are identified to represent a population with particular characteristics. They are subsequently used as informants to recommend similar individuals (Somekh and Lewin, 2005). This technique was considered appropriate for the study as it brought together people on the basis of some shared experiences, especially those related to water supply and sanitation services in the area. This technique was useful for identifying participants for the focus group discussions.

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<sup>18</sup> Sampling error is a statistical term that relates to the unrepresentativeness of a sample (Mitchell, *et al*, 2005: 57).

### 3.3.1 CASE STUDY

This study followed a case study approach. This approach is generally considered useful for any study that seeks to understand an institution or an event by studying a single case for a period of time (Bouma, 1996). In other words, a case study aims at answering the question “what is going on” (*ibid*). Furthermore, a case study approach fits well with the needs of small-scale research by concentrating effort on one research site (Yin, 2003). However, case studies also have limitations. One major weakness is that it is not possible to generalize statistically from one or a small number of cases to the population as a whole (Somekh and Lewin, 2005). In addition, negotiating access to case study settings can be a demanding part of the research process (*ibid*). Despite these limitations, this approach was appropriate for this study because it concentrated on one instance, focusing on relationships and processes that are situated within a natural setting, and allowed for the use of multiple sources and methods (Denscombe, 1998). Furthermore, this approach was also appropriate as it helped to gain a greater understanding of consumers’ perceptions about water supply and sanitation services as supplied by the EWS. Even though the findings of this study may not be generalized, they could shed light on what might be happening in similar settings elsewhere.

### 3.4 DATA COLLECTION

In this study, two main methods of collecting data were utilized, namely, survey and focus group discussions. The survey was mainly utilized to gather and analyse socio-economic variables, while focus group discussions were utilized to explore specific topics and individual views and experiences, through group interaction. These two methods of data collection were deemed appropriate for the study as they provided critical information that would enable confirmation of each other *via* triangulation.

In this study, data was collected both qualitatively and quantitatively. According to Polit and Hungler (1987), human behaviour, problems and characteristics are best understood through the use of both qualitative and quantitative data. Greene *et al* (2005) contend that the use of multiple methods in social inquiries in order to assess a given phenomenon is critically important as it enhances confidence in the validity of the findings. Similarly, Rossman and Wilson (1991:40) suggest three broad reasons why it is important to use multiple methods in a study, namely: (a) to enable confirmation or corroboration of each other *via* triangulation; (b) to elaborate or develop analysis, providing richer detail; and (c) to initiate new lines of thinking through attention paradoxes or ‘surprises’, providing fresh insight. Other scholars have claimed that the use of multiple methods has the potential to expand the scope and the breadth of a particular study by

using different methods in different components (Graham *et al*, 1989).

A qualitative methodology was applied in this study because its real purpose was “not counting opinions or people but rather exploring the range of opinions, the different representations of the issue” (Gaskell, 2000: 41). It was also preferred because of its emphasis on people’s lived experiences, which were fundamentally “well suited for locating the meanings people place on events, processes and structures of their lives: their perceptions, assumptions, prejudices, and presuppositions, and connecting these meanings to the social world around them” (Miles and Huberman, 1994: 10). Thus, in this study, qualitative research refers to the type of research involving the interpretation of non-numerical data (Welman and Kruger, 2003). According to Van Maanen (1997: 520), qualitative research is an “umbrella” phrase “covering an array of interpretive techniques which seek to describe, decode, translate, and otherwise come to terms with the meaning of naturally occurring phenomena in the social world”. In a broader sense, qualitative research is fundamentally a descriptive form of research (Mitchell *et al*, 2005).

The main advantage of using qualitative research in a particular study is that it offers detailed insights into a particular phenomenon as it allows the researcher to draw more from the respondents (Chama, 2007). It also gives a more in-depth description and understanding of events or actions and this gives the researcher an opportunity to gain insight into why and how these events occur (Valle *et al*, 1989). Furthermore, qualitative research also allows respondents to express their feelings and opinions in their own words (Power, 1998). However, it has its own limitations. Firstly, it is time consuming particularly when it comes to collecting and analysing data (Mitchell *et al*, 2005). The collection of data involves spending many man-hours in the field, and this may turn out to be expensive for the researcher. In addition, the analysis of the data is also a time consuming exercise, and this also may turn out to be costly for the researcher.

Despite these disadvantages, the qualitative research method was utilized as it was considered appropriate for the purposes of this study. This was done through focus group discussions. According to Litosseliti (2003), focus groups are structured groups with selected participants, normally led by a moderator. They are set up in order to explore specific topics and individual views and experiences, through group interaction (Kitzinger, 1999). Kruger (1994) further contends that focus groups are a carefully planned discussion designed to obtain perceptions on a defined area of interest in a permissive, non-threatening environment, where participants share their opinions freely. Other scholars argue that a focus group refers to a research method that involves bringing together a group of individuals, usually a relatively homogenous group, to discuss a specific set of issues under the guidance of a facilitator trained to stimulate and focus the discussion

(Schedlin and Schreider, 1995).

The main objective of the focus groups was to get beneath the surface of a particular topic with the presumption that respondents would reveal more when stimulated by the comments of others (Chama, 2007). In this case, the aim was to explore in detail the perceptions of the participants with regards to water supply and sanitation services in the area. Permission to run the groups was sought from the area councillor who graciously obliged. A pilot focus group was conducted prior to running the actual focus groups. The participants were chosen at random, and both genders were equally represented, three men and three women. The key aim for running this particular pilot group was to identify the kind of interaction and the dynamics of discussion that existed among the participants in general and among the male and female participants in particular.

Two focus groups were conducted, comprising of 10 people each. Both genders were equally represented. Smaller numbers were preferred because they were easy to manage, moderate and analyse successfully. Furthermore, smaller groups, as opposed to larger groups, are more appropriate if the aim is to explore complex, emotional topics or to encourage detailed accounts (Gibbs, 1997). In this case, they created an environment for brainstorming and generation of ideas, with participants discussing different angles of a problem and possibly helping to identify solutions. However, they also have some limitations. Firstly, focus groups may be biased and subject to manipulation, especially where participants are led to respond to the moderator's own prejudices (Morgan, 1997). It is also difficult to make generalizations based on the focus group information, not only because of the limited number of participants, but also due to the difficulty of having a representative sample (*ibid*).

Despite these limitations, focus groups were used in this study because they were deemed appropriate for the topic at hand. They were also considered an appropriate method for gaining detailed information on people's perceptions towards water supply and sanitation services in the area. All focus group discussion questions were translated into *isiZulu* and interpretation was provided for the researcher. Participants were assured of the confidentiality of the information provided during these discussions. The focus group discussions were held at the community library hall. The researcher through an interpreter introduced the topic and outlined how the discussions would take place. Each participant was given time to give their opinions concerning the topic during the discussions.

Quantitative research methods were also utilized in this study. In simple terms, quantitative research methods involve interpreting numerical data usually using scientific methods (Miles and Huberman, 1994). Unlike qualitative research methods, quantitative research methods do not involve the investigation of processes but emphasise the measurement and analysis of causal relationships between variables within a value-free context (Denzin and Lincoln, 1994). In this sense, quantitative research focuses mainly on the causal aspects of behaviour and the collection of facts that will not change easily (Mitchell *et al*, 2005). The main advantage of using the quantitative research method is that it uses structured methods to evaluate objective data (*ibid*). However, one of its shortcomings is that it controls the investigation and structure of the research situation in order to identify and isolate variables (Polit and Hungler, 1987). It also tends to be restrictive as it is initially designed to give numerical results (Bouma, 1996). This information is usually reported in the form of graphs, pie charts and tables, telling the number of something, its proportion or what the trends are (*ibid*). It requires the researcher to have a sound knowledge of statistical techniques in order to interpret the information.

In this study, quantitative data was collected through a structured questionnaire. Questionnaires were considered appropriate because they provided a way of gathering structured data from respondents in a standardized way, either as part of a structured interview or through self-completion (Somekh and Lewin, 2005). In addition, questionnaires as instruments of data collection were chosen because of their ease of utility, their value in providing entry into communities, and their ability to collect large quantities of data (Welman and Kruger, 2003; Woodhill and Robbins, 1999; Pratt *et al*, 1992). A total of 208 questionnaires was administered, one questionnaire per household. The questionnaires collected data on the socio-economic background of the respondents as well as variables relating to water supply and sanitation services.

Six research assistants were employed to assist in the administration of the questionnaires. They were all Zulu-speaking Black South Africans, aged between 25-30 years. Among this group, both genders were equally represented and they all lived in the study area. Since the research assistants had never participated in research activities prior to the study, the researcher organized and facilitated a one-day workshop to orient and train them in the study objectives, data collection techniques and basic tips on how to conduct interviews.<sup>19</sup> Ethical issues such as anonymity and confidentiality were also explained. As Somekh and Lewin (2005) contend, if questionnaires are going to be administered by someone other than the researcher, a clear and comprehensive set of instructions is required. Guidance was provided to ensure that follow-up questions such as those that required probing or prompting were properly administered to ensure consistency. In addition,

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<sup>19</sup> See appendix A, research assistants orientation workshop held on 5<sup>th</sup> May 2007.

debriefing sessions for interviewers were conducted after the interviews were completed to identify any matters, which ought to be taken into consideration during analysis, such as those questions that were unclear.

Apart from the data collected from the study area, the researcher consulted both local and national policies on water supply and sanitation in order to gain insight into the framework within which local water-related issues were housed and governed. Policies that were analysed included (i) Towards a Water Services White Paper (DWAF, 2002); (ii) Draft White Paper on Water Services (2002); (iii) National Water Resource Strategy (2002) and (iv) the Free Basic Water Policy (2001). These documents provided secondary information that was helpful for the study. In addition, the researcher attended various local and national water and sanitation-related workshops to build his knowledge foundation. These workshops provided the researcher with valuable insight into water supply and sanitation issues in the country.

### **3.5 PILOT TESTING**

The questionnaires for the study were pilot tested before actual data collection commenced. A total of 40 questionnaires were randomly administered in the study area. The researcher and research assistants administered the questionnaires. This initiative was important for the study as it enabled the researcher to identify problems in the design, sequencing of questions as well as procedures of recording responses. According to De Vaus (2002), a pilot test is aimed at ensuring that the participants understand the intended meaning of the questions and that their answers are logical. It also helps in detecting errors such as ambiguous questions (*ibid*). The responses obtained from the interviewees were reviewed and where questions needed revision, modifications were made..

### **3.6 DATA MANAGEMENT AND ANALYSIS**

In this study, data management is defined as the operations needed for a systematic, coherent process of data collection, storage and retrieval (Denzin and Lincoln, 1994). These operations are aimed at ensuring (a) high-quality, accessible data; (b) documentation of just what analyses have been carried out; and (c) retention of data and associated analyses after the study is completed (*ibid*). Once the quantitative data was collected, it was organized and coded so that it could be analysed<sup>20</sup>. After coding the data, it was captured on the computer to be analysed. This data was statistically analysed using the Statistical Package for the Social Sciences (SPSS) programme.

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<sup>20</sup> Coding is defined as identifying the variables needed to be analysed statistically and assigning different code values (Mitchell et al, 2005: 227).

Through the use of SPSS programme, descriptive analysis and other statistical tests were conducted. Similarly, data from the focus groups was firstly transcribed and thereafter, those substantive parts in the transcript that related to the research questions, as well as new topics or issues were classified and coded according to themes.

According to Ryan and Bernard (2006), theme identification is one of the fundamental tasks in qualitative research. Hayes (2000) defines themes as the recurrent ideas or topics, which are detected in the material being analysed and usually come up on more than one occasion in a particular set of data. Other scholars argue that themes can also be described as “umbrella” constructs, which are usually identified by the researcher before, after, and during data collection (Mitchell *et al.* 2005; Henning, 2004; Van den Akker, 1999; Stake, 1995; Yin, 2003). At this point, each section of the transcript was coded with words, which described what participants said and was repeated every time an idea reappeared.

This process was made easier through the use of QSR NVivo, computer software used to analyse qualitative data. This qualitative data generated were utilised to support statistical results. While time consuming, this process helped the researcher to explore the depth of qualitative data. A chronic problem of qualitative research is that it is done chiefly with words and not with numbers, as in quantitative research (Miles and Huberman, 1994). According to these authors, ‘words are “fatter” than numbers and usually have multiple meanings’ (*ibid*: 213). This has potential to complicate the analyses considerably. In this study, even though words were converted into numbers and symbols while coding, it was ensured that words were retained and used together with the symbols throughout the analysis. After transcribing the focus group discussion tapes, they were erased with tape eraser, while the transcribed information was stored safely and confidentially.

### **3.7 ETHICAL CONSIDERATIONS**

Informed consent forms were given to all respondents as part of the requirements for ethical research. Informed consent is essential as it ensures people’s freedom not to participate in the research if they are not comfortable with it (Scheyvens *et al.*, 2003). The researcher ensured that confidentiality; anonymity and privacy were strictly observed. Somekh and Lewin (2005) contend that confidentiality is a principle that allows people not only to talk in confidence, but also refuse to allow publication of any material that they think might harm them in any way. Similarly, anonymization is a procedure to offer some protection of privacy and confidentiality (*ibid*). The purpose and the objectives of the study were explained. Other issues explained to respondents included the identity of the researcher and the research assistants as well as how the respondents

were chosen. All the information provided by the participants was treated as confidential and was not divulged to any third parties. All the tapes that were used in recording focus groups discussions were stored safely throughout the study period. It was also ensured that none of the participants' identity was revealed in any way during the study. Pseudonyms were used to conceal their identity.

### **3.8 LIMITATIONS**

Due to time and financial constraints, this study was limited to Ohlange Township. It was also difficult to reach some of the key officials in the DWAF. There was a civil service workers' strike at the time of the research and this made it difficult for the researcher to arrange for interviews with the officials from the Department. Obtaining key information from key officials was difficult. Another limitation related to the language barrier, since the researcher is not an isiZulu-speaker. However, interpreters were utilized where necessary, especially during the data collection process.

## **CHAPTER FOUR: FINDINGS AND DISCUSSION**

### **4.1 INTRODUCTION**

This chapter presents the findings and the discussion of the study. The study had three main objectives: firstly, to investigate consumer perceptions towards water supply and sanitation services in Ohlange Township as provided by the eThekweni Municipality; secondly, to investigate the extent to which Ohlange residents are involved in the water supply and sanitation services delivery process; and thirdly, to investigate the state of water supply and sanitation services in the Township.

This chapter begins by presenting the findings of the study, followed by discussion. An attempt is made to analyze the findings in relation to supply and demand-driven approaches, the two theories that guided the study. Where possible analysis was done by the gender of the respondents owing to the perception that women are responsible for ensuring that there is water for household use.

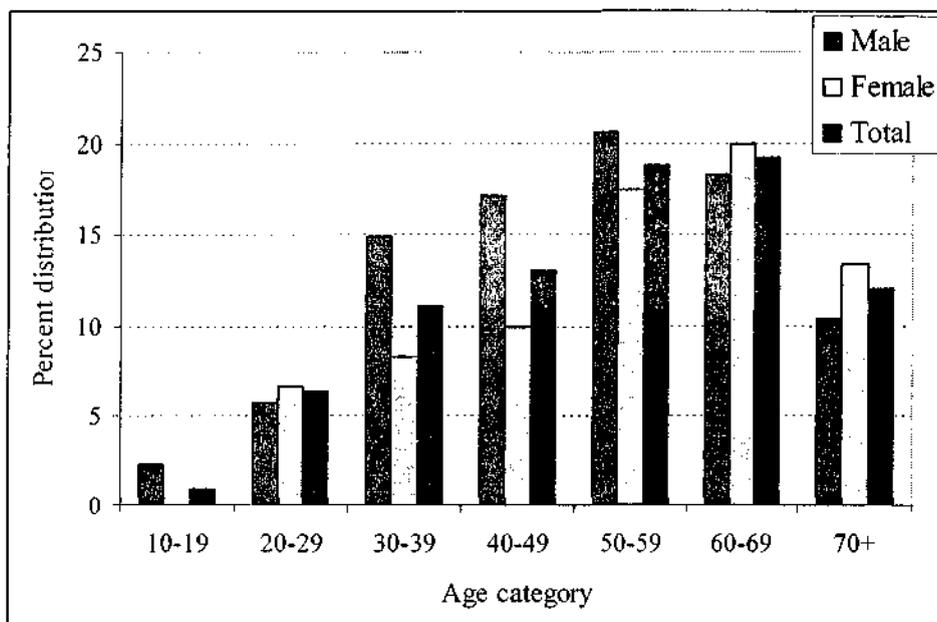
### **4.2 SOCIO-ECONOMIC CHARACTERISTICS OF RESPONDENTS**

The socio-economic characteristics of households are important indicators of their ability to obtain and afford water and sanitation services. It has been argued that people can fail to obtain water from a safe source not because there is no water but because they fail to pay for it (Lawrence *et al*, 2002). In this sense, it is imperative that the socio-economic status of households be determined as it reveals affordability of services. This information is critically important for determining more pragmatic, affordable and sustainable interventions. Furthermore, understanding the socio-economic condition of households offers possibilities of linking the availability of water and the ability of households to obtain water from a safe source (*ibid*).

Dungumaro (2007) notes that analyzing socio-economic variables greatly assists in allocating resources. It also offers the possibility of linking the availability of water and the ability of households to obtain water from a safe source (*ibid*). In addition, the socio-economic status of households is also closely linked to household welfare (Dungumaro, 2007). This affects the ability of a household to afford water and sanitation services (Schoeman and Magongoa, 2004). Empirical studies conducted elsewhere in South Africa in similar settings to this study indicate that poor people have a high expectation that the national government will subsidize these services (Bakumeni, 2004; Naidoo and Mosdell, 2004).

#### 4.2.1 Age Distribution of the Respondents

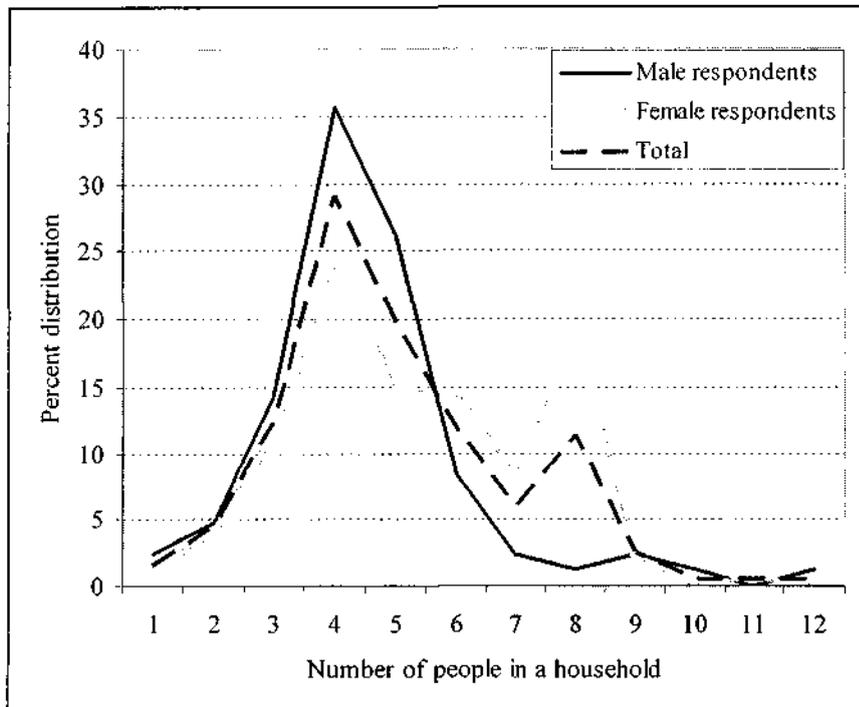
Figure 1: Percent distribution of age of respondents



The above figure indicates that the majority of participants, both men and women (19%) were in the 60-69 age category. However, there were more men (over 20 %) in the 50-59 age category who participated in the study than women (18 %). Interestingly more women (20 %) who participated were in the age category 60-69 years. It is important to mention that the 10-19 age category was included to make the above analysis possible. The lowest age in the study was 19 years. The mean age of the study was 39 years. It is also imperative to note that the selection of the heads of household did not depend on whether the participant was male or female. This is confirmed by similar studies conducted elsewhere in South Africa (Budlender, 2001). This study demonstrates evidence of favoring older people as heads of families, even though when head of households in this study were approached, it was generally men that were indicated as heads of household.

#### 4.2.2 The Household Size

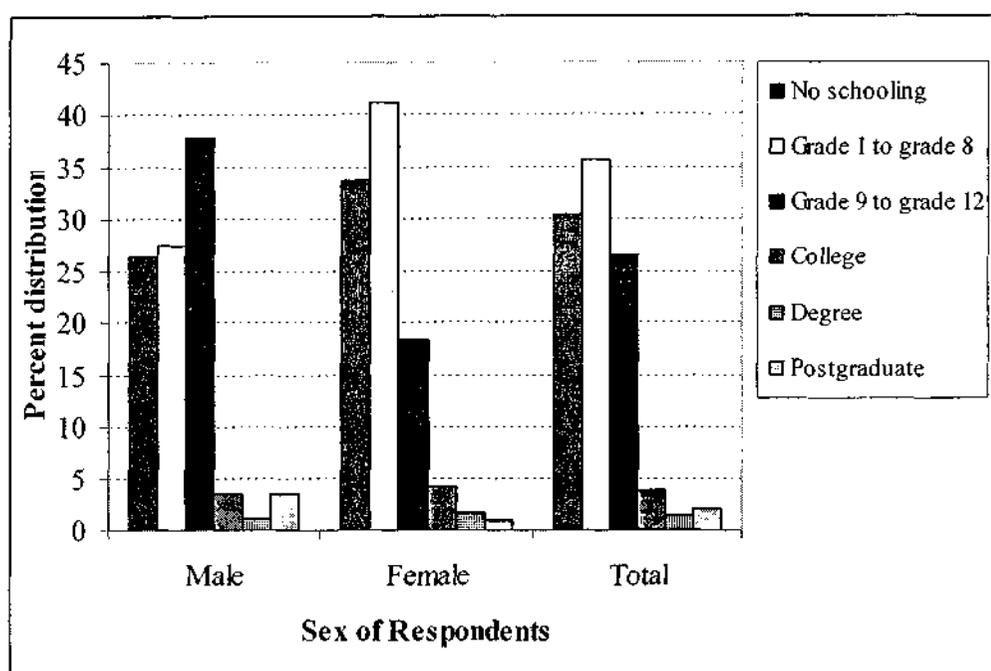
Figure 2: Number of people in a household



Household size is closely linked to the socio-economic status of households and their prospects in life (Weeks, 2005). Figure 2 above demonstrates that more men were found in households with four people (approximately 35 % of the respondents). More women were found in households that had 6-9 people on average, compared to male respondents and the total. This is exemplified by the results on mean household size, which show that male respondents have 4.55 persons while female respondents have 5.41. For all households, the figure is 5.04. The mean household size for this study was five members per household. This figure is in line with the mean household size for KwaZulu-Natal (Mturi *et al*, 2005). However according to Statistics South Africa the country's average household size based on the result of the population census enumeration in 2001 is four people per household (*ibid*). According to Pirouz (2004), the household size in the country is generally decreasing. The mean size for this study is therefore higher than the mean household size for South African households.

### 4.2.3 Educational Level of the Respondents

Figure 3: Percent distribution of education of respondents



The majority of women (41%) had grade a 1-8 level of education while the majority of men (36%) had grade 9-12 level of education. Even though there were more people with a grade 1-8 level of education on average, there were more women than men with no schooling at all, about 34 % of the respondents, which is higher than the total average 30 %. This average for women is higher compared to that of men, 26 % of the respondents. Post-grade twelve education is generally low across both genders. Reasons could include a lack of money to pay for tertiary education and the need to work and earn money to support their families. Interestingly, there are more women with a college level of education than men. This is encouraging as it indicates that there are opportunities for women to be empowered through accessing higher education. Most women in the area are economically active. The majority are employed in formal institutions like clinics and schools. Existing empirical evidence suggests that there is a strong linkage between education and good employment (Jabu, 2006; Mturi *et al*, 2005).

### 4.2.4 Occupational Status of the Respondents

It is important to determine the employment and occupational status of the respondents because it has been noted that the population in KwaZulu-Natal is predominantly rural. One of the

fundamental socio-economic problems that they face is unemployment and poverty (Mturi *et al*, 2005). Employment and occupational status shed light on their ability to afford water supply and sanitation services (Schoeman and Magongoa, 2004).

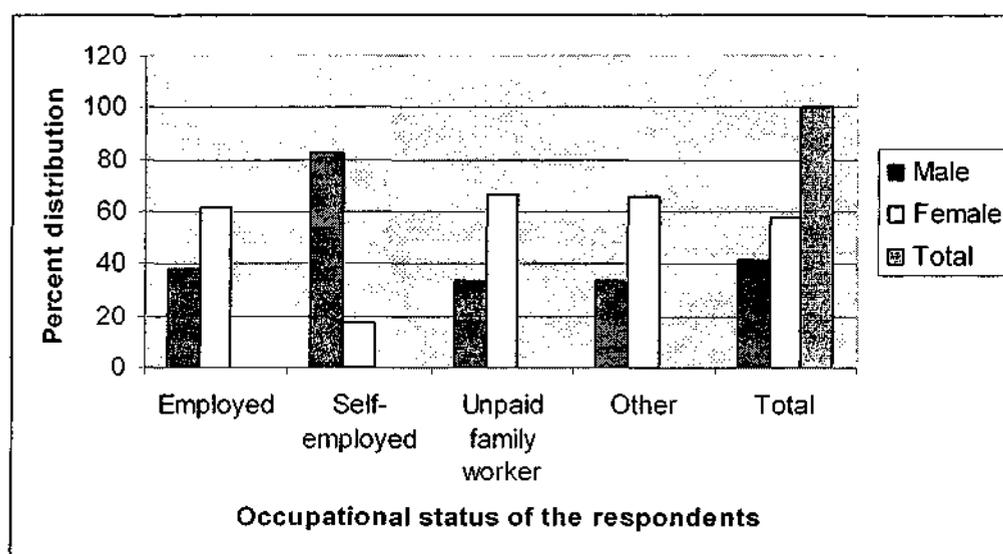
**Table 1: Percentage distribution of occupational status of the respondents**

Occupational status	Percent (%)
Employed	57.2
Self-employed	11.1
Unpaid family worker	1.4
Other	30

N=203

The majority of the respondents in the sample (57 %) were employed at the time of the survey while 30 % were unemployed. Less than 12 % of the respondents were self-employed while a negligible proportion was employed by families. The official unemployment rate in KwaZulu-Natal is high, estimated to be about 31 % (Mutedi, 2002). This has a significant impact on the ability of people to afford water and sanitation services (Satterthwaite, 2003).

**Figure 4: Distribution of occupational status by gender**



Interestingly, when the analysis was done by gender as shown above (Figure 4), it is observed that more women (61 %) than men (39 %) were formally employed. In KwaZulu-Natal as a whole, the unemployment rate of women in occupational categories outside of formal employment is high compared to that of men (Mutedi, 2002). According to Oni *et al* (2002), lack of employment opportunities among women may lead to a lack of basic means of sustenance, thereby exacerbating

poverty. This in turn hampers opportunities for women to afford water and sanitation services.

#### 4.2.5 Marital Status of the Respondents

**Table 2: Percent distribution of the marital status of the respondents**

<b>Marital Status</b>	<b>Percent (%)</b>
Married	57.2
Unmarried	18.3
Divorced	9
Separated	7.2
Widow/Widower	5.3
Never married	1.0

N=207

The majority of the respondents in the sample (57%) were married, while 18 % were single. The proportion of those who were divorced was less than 10 % while that of separated spouses was 8 %. Less than 5 % of the respondents were either widows or widowers while less than 2 % of the respondents never married. The determination of marital status helps to establish the family composition of a particular geographical area. Empirical studies conducted elsewhere in South Africa indicate a decrease in marriage rates and an increase in divorce rates (Bumpass and Raley, 1995).

### 4.3 PEOPLE'S ATTITUDES AND PERCEPTIONS TOWARDS WATER SUPPLY AND SANITATION SERVICES AS PROVIDED BY THE ETHEKWINI MUNICIPALITY

#### 4.3.1 Perceptions about EWS as a provider of water supply and sanitation services

##### 4.3.1.1 Infrastructure

The majority of the respondents indicated significant dissatisfaction with the infrastructure in the area. The problems experienced included burst pipes and blocked drains, which are not attended to by the EWS promptly, even when reported:

*"The water system and the infrastructure in the area is very old and ineffective, and because our meters are very old, they sometimes burst because of water pressure...our drainages are blocked and our pipes are broken most of the times ..."*

*"We have meters in our homes but our statements are not provided.... when they are sent at the end of a particular month, the bill is so high...we cannot afford to pay."*

*"... We also end up paying too high bills because they do not come in time... and the fact that some people do not have meters in their homes, we are paying for them..."*

#### **4.3.1.2 Capacity of Service Delivery**

Generally, the respondents claimed that the EWS lacked the capacity to deliver good service. Most respondents (83%) indicated that the EWS takes a long time to respond to any infrastructural problems, including reconnecting water when supply had been disconnected due to defaulting on payments or accumulated arrears:

*"When they cut water off because one never paid on time or has arrears, the municipality takes time to fix the problem and the reconnection fees are very high for us..."*

*"We need the Municipality to bring its engineers to do a good job and to attend to our problems..."*

*"Sometimes the Municipality responds, but they (EWS) do not make follow ups...and they delay in sorting out our problems and concerns."*

*"Water interruptions occur many times...and the water we receive is too insufficient for our needs..."*

In addition, the respondents claimed that water interruptions occur frequently in the area. The amount of water they receive is also inadequate and does not meet their household needs. There is a general lack of efficiency in this regard.

#### **4.3.1.3 Sanitation Services**

Most respondents are dissatisfied with the sanitation services in the area provided for by the EWS. Specifically, they are not happy with the type of toilets they have and their quality:

*"We are not happy with our toilets; they are not of good quality".*

*"There is also no privacy with our toilets, they are in such a state that anybody passing along the road can see you... it is shameful to say the least."*

In addition, the respondents also claimed that raw sewerage is left to spill over along the roads. This is as a result of blocked drainages, which poses serious health risks to the community:

*"Most of the times the drainages are blocked; causing raw sewerage to overflow on the roads".*

*"This is dangerous to us and our children, and it can cause serious diseases to us".*

*"It is very unhygienic and we are not happy."*

#### **4.3.1.4 Inequality in service delivery**

Generally, the respondents felt that those people who are financially secure access good service in terms of sanitation delivery. Those members of the community, who are financially challenged, do not receive the same type of service:

*“Money talks.”*

*“Those who have money can have good service; us who are poor struggle and we don't get the same service”.*

#### **4.3.1.5 Perception Bias**

Most of the respondents claimed that they receive inadequate service from the EWS because they are a poor community. This assertion concurs with the quantitative analysis, whereby 59% of the respondents claimed that the services have not improved for the last five-year period (see Table 11).

*“We feel the Municipality underrates us because we are a poor community...and we still live in RDP houses ... that is why our concerns are not taken seriously...”*

#### **4.3.1.6 Bureaucracy**

The majority of respondents claimed that the EWS has poor administration, which is insensitive to their concerns. There is too much red tape and this inhibits promptness in terms of service delivery. Administratively, the majority of the respondents claimed that the billing system has not been efficient. The bills always come in late and they reflect huge amounts that most of the people cannot afford to pay:

*“..Even when we call the call center to complain, the EWS ask us many questions and still they do not fix the water...”*

#### **4.3.1.7 Participation**

The majority of the respondents claimed that the EWS does not allow them to participate in the issues concerning water supply and sanitation in the area. The general feeling was that even their attendance at community water committees is never appreciated. They also feel that their concerns are never taken seriously:

*“Nowadays, even if they call people for meetings, we do not attend because they do not take our concerns seriously....the Municipality does not implement what they promise us...”*

*"They never involve us in the decisions they make...we feel isolated and disowned. We have no voice, even when we attend meetings, we are told what they are planning to do and they don't ask us what we want, that is why we no longer attend their meetings."*

*"We have never been consulted; we only see things happening, someone decides for us, not ourselves."*

According to the quantitative analysis of this variable, the majority of the residents (83%) claimed that the EWS makes the decisions for them, while the community (14%) and international organizations and businesses (3%) have much less influence (see Table 13). This imbalance in participation makes the community feel disempowered in an important area (water and sanitation) that affects the quality of their lives.

#### **4.3.1.8 Community Responsibility**

Generally, the community claimed that it is responsible for looking after the infrastructure in their area. However, vandalism and illegal water connections are some of the problems that the community is grappling with in its bid to exercise some responsibility. The community stands united to exercise oversight over the existing infrastructure in the area:

*"People must stop stealing water pipes".*

*"People must report all those who are doing wrong things in our community, so that we stop vandalizing our water pipes".*

*"We must not allow people to connect water illegally in our area".*

#### **4.3.1.9 Water Conservation**

The majority of the community members conserve their water. They use it sparingly, partly because there are problems with consistent supply and in part because it is insufficient in quantity. Most of them claimed that they avoid wastage by ensuring that excess water is stored properly:

*"Most of the times we don't have water and when we have it, we don't know when it will disappear; so we have big buckets where we store our water because we don't know when it will be restored when they close it for us."*

#### **4.3.1.10 Cleaning Services**

The community would like to have their streets swept regularly. The streets in the area are littered with plastic bags and loose papers. Sadly, municipal workers are never seen in the area. The community would like to have these services restored:

*"Nobody cleans the roads and the street cleaners are never seen or followed up."*

*"The Municipality must also know that we need to live in clean environments so they must clean our areas."*

#### **4.3.1.11 Civic Education**

The community feels there is a need for them to be educated about their rights as consumers. The majority claimed that they don't know what to do when they are confronted by problems relating to water supply and sanitation. They are unaware of recourse mechanisms available to them as consumers:

*"The Municipality must teach us our rights as consumers...most of these problems persist because most of us do not know what we should..."*

*"The Municipality must also teach us about Free Basic Water. We do not know anything about it..."*

### **4.4 THE EXTENT TO WHICH OHLANGE RESIDENTS ARE INVOLVED IN WATER SUPPLY AND SANITATION SERVICES DELIVERY PROCESS**

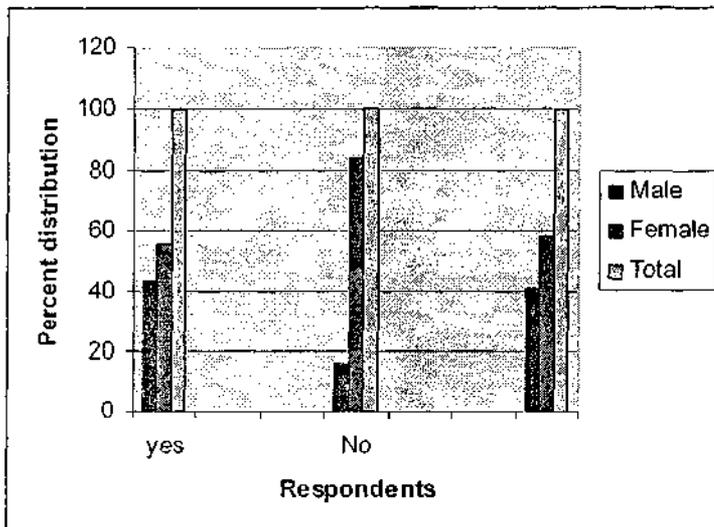
#### **4.4.1 Community Participation in the Decision Making Processes Concerning**

##### **Water Supply and Sanitation Services**

The concept of community forums was introduced by the South African government to enable communities across the country to participate in the development agendas of their areas (Schoeman and Magongoa, 2004). These forums were meant to create platforms for promoting ongoing citizen participation in municipal affairs. They are a constructive vehicle for promoting understanding between communities and the local authorities in basic service delivery (Atkinson, 2002). In this study, the majority of the respondents (90%) said that there are community forums in the area,

while only 10% claimed otherwise. When the analysis was done by gender, it was observed that more women (56%) than men (44%) were aware that there are community forums in the area as shown in Figure 5 below:

**Figure 5: Percent distribution of awareness of community forums by gender of the respondents**



This could be taken to imply that more women than men were likely to be attending these meetings. This could possibly be explained by the fact that since traditionally women are the primary users and managers of water in the household, they are more likely to show an interest in attending such meetings. Interestingly, when further analysis was done to establish whether the Municipality took community concerns seriously, 81% of the respondents indicated that this was not the case. This could be the reason why people do not attend these forums.

#### 4.4.2 Decision Making On Water Supply and Sanitation Services

Participatory delivery of basic services includes the community in decision-making processes (Atkinson, 2002). The majority of respondents (83%) claimed that the EWS makes decisions on water supply and sanitation services in the area, while the community is remotely involved, contributing only 14% as shown below (Table 3). International organizations and businesses also make a very marginal contribution. This indicates that the community plays a very marginal role as far as decision-making is concerned.

**Table 3: Decision making authority for water supply and sanitation services in the area**

Decision making authority	Percent Contribution (%)
EWS	83
Community	14
International Organization	1.0
Businesses	2.0

#### 4.5 THE STATE OF WATER SUPPLY AND SANITATION SERVICES IN OHLANGE TOWNSHIP

##### 4.5.1 The Quality of Water Supplied

The term “water quality” is used to describe the microbiological, physical and chemical properties of water that determine its fitness for use (WRC, 2001). Many of these properties are controlled or influenced by substances, which are either dissolved or suspended in the water (*ibid*). Good quality water is therefore free from all substances that have potential to jeopardize people’s health (*ibid*).

**Table 4: Quality of water supplied by the EWS**

Quality of water	Percent (%)
Excellent	4
Good	94
Fair	0.5
Poor	1.4

N=208

The majority of the respondents in the survey (98%) felt that the quality of water is good while less than 2% claimed that the quality of the water is not good. However, it was observed that slightly more men (95%) than women (93%) thought that the quality of the water is good, as shown in the Table 5 below.<sup>21</sup>

<sup>21</sup> This observation shows a response rate to the question that more men responded to than women and not a response to the question itself. However, from personal observation while conducting focus group discussions, it was observed that men, too, were concerned about water quality.

Though the difference is marginal, it may indicate that the men in this study are equally concerned with water issues. Traditionally, women have knowledge of water quality because they are generally the primary users and managers of water in the household (Jabu, 2006).

**Table 5: Quality of water and the gender of the respondents**

Quality of water	Male (%)	Female (%)
Excellent	2	2
Good	95	98
Fair	0.5	0.5
Poor	1.5	1.5

N=208

Traditionally, men have not been known to be concerned with water issues, especially at household level (Wilson, *et al*, 2003). This is partly as a result of the patriarchal nature of our society. A shift in perceptions about those things that were previously considered to belong to ‘women’ would be a positive change (Cousins, *et al*, 2004). This breakdown of traditional perceptions is likely to influence the way both men and women respond to responsibilities associated with water quality. This is of critical importance as water quality has the potential to impact significantly on health status of households. Fostering this understanding in a household cannot be overemphasized.

**Table 6: Distribution of payment of water bills by gender of the respondents**

Gender	Percent distribution	
	yes	no
Male	98.18	1.82
Female	92.06	7.94

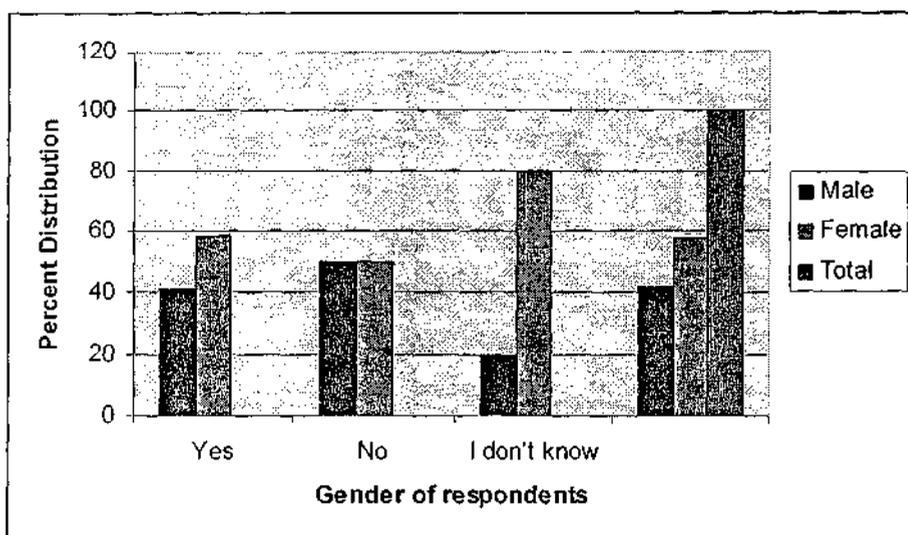
N=208

More men (98%) than women (92%) claimed to pay for their water bills (Table 6). Since more men than women in this area are unemployed (see Figure 4), it is more likely that women gave them money to pay the bills when the accounts were due. Balfour *et al*, (2006) note that the percentage of customers who pay their bills is one proxy for consumer satisfaction. Generally, if a customer feels they have not received the expected service, then they may choose to ignore or dispute the account. This is sometimes seen when water supply to an area is erratic or intermittent (Uys, 2004).

#### 4.5.2 Is the water clear and clean?

One of the many attributes of the quality of the water supplied is cleanliness and its clearness (WRC, 2001). In this study, the majority of the respondents claimed that water from their taps is clean and clear. However, more women (58%) than men (42 %) made this claim (see Figure 6 below). A likely reason for this is that traditionally women are the primary users and managers of water (Bakumeni, 2004). The knowledge of cleanliness of water is critical because if households are unaware they can be predisposed to waterborne diseases such as diarrhea and dysentery (Batram, *et al*, 2002). Coloured water indicates the presence of contaminants, which could be potentially fatal if consumed by human beings (*ibid*).

**Figure 6: Knowledge of whether water is clear and clean by gender of the respondents**



In this study, six sources of water were examined. These included piped tap water in the dwelling, piped tap water on site or in the yard, neighbours' tap, borehole on site, rain water tank on site, public tap, water carrier or tanker, dam, well, river and water vendors. The source of household water is of great significance. Overall, the results in Table 6 above indicate that the respondents have confidence not only in the quality of the water supplied by the EWS but also with the sources of drinking water in the area. It is highly likely that people can lead healthy, quality lives if the water they consume is free of pathogens and other disease-causing contaminants. Unsafe water sources can lead to serious waterborne diseases.

The proportion of women with water in their dwelling (64%) and in their yard (51%) was significantly higher than that of men (36% and 48% respectively) as shown in Table 7 below. Interestingly, more women (63%) than men (37%) use public taps. This is because most of the women who cannot afford up-market housing live in informal houses (shacks), which do not have

piped water. They are forced to make use of the public taps for their daily household chores such as laundry and cleaning of their utensils. It could also be that women are required to fetch water and men are not in many cultures.

**Table 7: Source of drinking water of the household by gender of the respondents**

Source of drinking water	Male	Female
Piped (tap) water in dwelling	36	64
Piped (tap) water on site or in yard	48	51
Neighbours' tap	100	0
Public tap	37	63
Water Carrier/ Tanker	0	100
Dam	0	100

#### 4.5.3 Water interruptions in the township

Water interruptions are generally a major cause of frustration (Balfour *et al*, 2006). Generally, women seemed to know than men the causes of water interruptions.<sup>22</sup> The most likely reason for this could be because women are managers of water in the household; they are more likely to be affected by water interruptions than men (Jabu, 2006). The majority of women (75%) claimed that general maintenance causes the most interruptions, while the majority of men (47%) claimed burst pipes cause the most interruptions. More women (83%) than men (17%) claimed they did not know the cause of the water interruptions in the area. Interestingly, more women (100%) than men claimed there is not enough water in the system.

<sup>22</sup> This knowledge was acquired through communications done by the EWS officials.

**Table 8: Causes of water interruptions by gender of the respondents**

<b>Causes of water interruption</b>	<b>Male (%)</b>	<b>Female (%)</b>
Burst Pipes	47	53
Pump not working	43	57
General Maintenance	25	75
Not enough water in the system	0	100
Don't Know	17	83

N=208

#### **4.5.4 Illegal Connections of water**

Illegal water connections hamper effective service delivery (Uys, 2004). The cost of replacing stolen pipes is enormous for all local authorities in South Africa (Barta *et al*, 2005). Operational costs for municipalities inevitably increase every time water infrastructure is vandalized. In this study, the majority of the respondents (83%) claimed that there are no illegal water connections in the area. Only 17% of the respondents claimed otherwise. This indicates that the communities are aware of the importance of maintaining the infrastructure and avoiding vandalism. Other studies conducted in similar settings elsewhere in South Africa indicate vandalism as the prime problem related to infrastructure maintenance in townships (Barta, 2004).

#### **4.5.5 Sanitation - Toilet Facilities**

The household toilet facility is an important aspect of a household's health and sanitary status (Mturi *et al*, 2005). It is the responsibility of all local authorities to provide basic sanitation facilities, which are easily accessible to members of a household. In this study the main toilet facility is the flush toilet (see Table 10 below). The majority of the respondents (97%) had a toilet facility, with 56% of all toilet facilities connected to a planned sewer<sup>23</sup>, while 44 % were connected to an unplanned sewer<sup>24</sup> as shown in Table 9. The majority of the respondents (99%) had flush toilets in their dwelling and were connected to a planned sewer, while 33 % had a pit latrine with ventilation pipes type of toilets, of whom the majority (98%) were connected to an unplanned sewer. Sixty seven percent of those households with pit latrines<sup>25</sup> without ventilation pipes were connected to unplanned sewers. (See Table 10 below).

<sup>23</sup> This is a sewer network, which is designed and connected to an operational treatment plant.

<sup>24</sup> These are sewer networks, which are not connected to any operational treatment plant. They are usually not planned for by a local authority in a particular settlement area. They are commonly found in informal areas.

<sup>25</sup> These are self-built pit latrines.

**Table 9: Percent Distribution of households with toilet facilities by type of sewer**

Households with toilet facilities		Households without toilet facilities
Planned sewer	Unplanned sewer	
56	44	3

**Table 10: Percent Distribution of type of toilet facility by type of sewer**

Toilet facility (% of total respondents)	Planned Sewer (%)		Unplanned sewer (%)		Total N
Pit latrine without ventilation	33	n=69	67	n=139	208
Pit latrine with ventilation	1.8	n=4	98.2	n=204	208
Flush toilet	99.1	n=206	0.9	n=2	208
Improved pit latrine	0		100		208
Chemical toilet	0		100		208

In this study, it was observed that households with flush toilets were connected to planned sewers. Flush toilets require a constant supply of water in order to function efficiently. This is the reason why households with flush toilets in formal settlements are connected to planned sewers. In contrast, households in undesignated areas were found to use pit latrines, which were not connected to the Municipal sewer systems. These households normally do not have proper means of disposing human waste after the pit latrines are filled. Instead, new pit latrines are dug next to the old ones. This implies that there is a potential risk of sewerage seeping into the ground, which could contaminate underground water.

#### 4.5.5.1 Awareness of toilet emptying services in the area

Sanitation is critical to healthy living (WRC, 1998). Improper handling of human waste jeopardizes the quality of people's health (Uys, 2004). It is the responsibility of local authorities to ensure that proper disposal of waste is maintained. Where there are no planned sewerage systems in a particular area, toilet-emptying services should readily be provided. In this study, the majority of the respondents (54%) claimed that they are aware of the availability of toilet emptying services in the area while 46% claimed that they did not know. However, only 43 % of those respondents that knew about the availability of these services had used them. This is disturbing because people need to know about such critical services that have a direct impact in their lives. The majority of those who used the services (21%) used shallow and small loose sewage systems of emptying (Table 11).

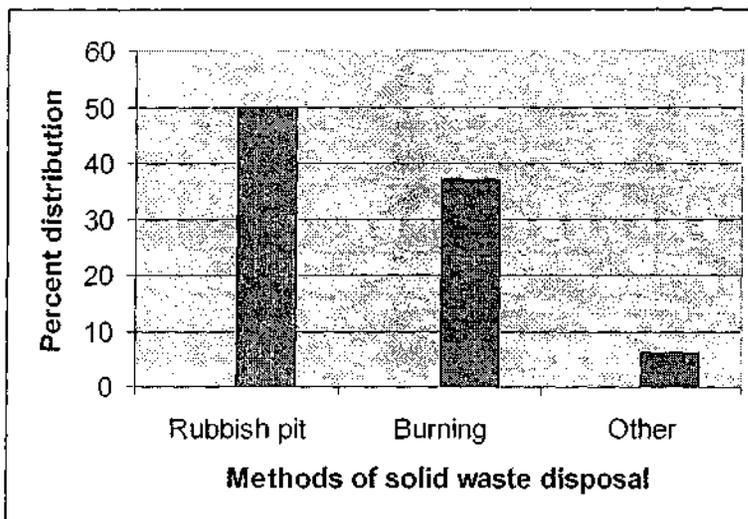
**Table 11: Distribution of emptying systems**

System of emptying	Percentage distribution (%)
Shallow sewage	20.7
Small-loose sewage	20.7
Conventional Septic tank	2.9
Other	2.4
Total	46.7

#### 4.5.5.2 Solid Waste Disposal

Solid waste disposal is a critical issue as far as quality of life is concerned. Due to urbanization, industrialization and population growth, solid waste production has increased over the years (Rogerson, 2004). This calls for proper measures to manage that waste before it becomes a health hazard. In this study, 50% of the respondents claimed that they used the rubbish pit as their preferred method of waste disposal, while 37% preferred burning and less than 13% use other methods of waste disposal (Figure 7 below). Interestingly, the majority of the respondents (92%) claimed that it is the responsibility of the Municipality to collect garbage in the area while less than 8% claimed otherwise.

**Figure 7: Methods of solid waste disposal**



### 4.5.5.3 Quality of water supply and sanitation services provided in the area

**Table 12: Ranking of the quality of EWS services over the past five years**

Quality of service	Percent distribution (%)	N
Improved	37	77
Worsened	1	3
Stayed the same	23	47
I don't know	38	79

N=206

The respondents were asked to rank the water supply and sanitation services in the area. The objective was to determine whether in their opinion these services have improved, worsened or stayed the same over the past five years. The majority of the respondents claimed that they did not think that the water supply and sanitation services in their area are as good as other areas. Thirty eight percent of the respondents claimed that the services have improved over the past five years, while 21% claimed that they have stayed the same (see Table 12 above). Similarly, 39% of the respondents said that they did not know whether these services have improved over the past five years. When the respondents were asked whether the services provided in the area are the same as in other areas, 60% of the respondents felt that the water supply and sanitation services in the area were just the same as in other informal settlements in the city, while 16% claimed that they have worsened and only 24 % of the respondents said that they have become better over time. When asked whether they thought that water supply and sanitation services are provided based on discrimination, 92% of the respondents answered in the affirmative. Only 8% disagreed. Overall, it can be concluded that the provision of water supply and sanitation services in the area falls short of the expectations of the community.

**Table 13: Ranking the quality of water supply and sanitation services**

<b>Quality of water supply and sanitation services</b>	<b>Percent distribution</b>	<b>N</b>
Excellent	4.3	9
Good	59	123
Fair	33	68
Poor	2.4	5
Very Poor	1	2

N=207

However, when an analysis was done for ranking the quality of services the majority of the respondents (63%) claimed that the services were good while only 33% of the respondents claimed that these services were fair as shown in Table 13 above.

#### **4.6 DISCUSSION OF RESULTS**

The study sought to gain insights into consumer perceptions towards water supply and sanitation services in Ohlange Township. This section discusses the findings of the study and relates them to the theories that guided the project.

##### **4.6.1 Consumer Measurement of Municipal Delivery**

The majority of the respondents involved in this study were generally satisfied with the water supply and sanitation services provided to them by the Municipality. However, most respondents emphasized the need for water to be supplied on a comprehensive and reliable basis. According to Schoeman & Magongoa (2004: 29), a good service delivery for informal settlements comprises of:

- (i) Reliable/available on a daily basis;
- (ii) Water of quality;
- (iii) Yard connections for all;
- (iv) Proper sewerage systems;
- (v) Free basic water;
- (vi) Maintenance of the system;
- (vii) Adequate water pressure;
- (viii) Comprehensive delivery;
- (ix) No blockages and/or leaks;

- (x) Working meters and improved billing;
- (xi) Improved communication.

In this study area, there are indicators for good service delivery, such as good water quality, free basic water and adequate water pressure. Other indicators such as maintenance of the system, reliable service, working meters, proper sanitary facilities and improved billing are yet to be achieved in satisfactory manner. It is worth mentioning that the government provides all the above services, and consumers have no influence over decisions.

#### **4.6.2 Communication and Information Dissemination by the Municipality**

Although the Municipality has a recourse mechanism to deal with consumer grievances, effective communication was still found to be lacking. Consumers thrive on effective communication from any service provider (Cant *et al*, 2006). The Municipality should ensure that information relevant to consumers is disseminated timeously.<sup>26</sup> Schoeman & Magongoa (2004) argue that consumers always have preferred methods of communication and information dissemination. In informal settlements, the generally preferred methods include ward committee meetings, newsletters, Councilors and other officials (*ibid*).

In this study, the majority of respondents preferred having municipal officials report directly to the community. However, the community in Ohlange claimed that they didn't have an audience with their councilor as often as they would like.<sup>27</sup> It is clear that if the Municipality is to satisfy its consumers, it must intensify its communication endeavors as well as improve its communication mechanisms. In addition, the Municipality ought to encourage its officials to communicate as often as possible with their communities and disseminate the necessary information to them. Moreover, the majority of the respondents during the focus group discussions in this study indicated that they would prefer to obtain information about municipal service delivery and performance on a regular basis.

#### **4.6.3 Consumer Participation**

Empirical studies have indicated the existence of improved service delivery where consumers participate in issues regarding service delivery in partnership with municipalities (Naidoo & Mosdell, 2004; Dawes & Rowley, 1998; Anton & Perkins, 1997; Clutterbuck & Kernagham, 1991).

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<sup>26</sup> This is clearly highlighted in the eThekweni Water and Sanitation Customer Service Charter. However, the majority of the respondents claimed that they were not aware of the charter.

<sup>27</sup> This was expressed during the study's focus group discussions held on 21/6/2007.

Furthermore, the White Paper on Transforming Public Sector Delivery, known as *Batho Pele*, published in 1997, highlights a demand-driven approach for institutions providing public services (Naidoo & Mosdell, 2004).

Naidoo & Mosdell (2004) note that this approach involves putting a framework in place for the delivery of public services, which treats citizens more like customers and enables citizens to hold public servants to account for the services they receive. Two of the eight *Batho Pele* principles concern the participation of consumers in basic service delivery:

- Consulting citizens about the level and quality of the public services they receive and, where possible, consulting them on the services that are offered;
- Determining service standards together with citizens, so that they know the level and quality of services that they can expect (Naidoo & Mosdell, 2004:24).

According to Schoeman & Magongoa (2004), the assessment of opportunities for participation in municipal activities related to evaluating delivery and performance include: attendance at ward committees, participation in meetings other than those offered by ward committee meetings and the identification of municipal and non-municipal committees that offer consumers an opportunity to participate in assessing municipal performance.

In this study, community participation in basic service delivery, especially with regards to water supply and sanitation, is very remote. Consumers expressed dissatisfaction with the level of their participation. They claimed that even though they attend and make their concerns heard in the ward committees and area meetings, they felt their concerns were never taken seriously. They also indicated that they are never consulted when new projects are undertaken in their areas. It is clear that consumer participation in the above three categories of evaluating consumer participation is unsatisfactory. The factors contributing to this phenomenon range from the unwillingness of the local people to attend the ward meetings to the lack of proper communication channels between the community and the local councillor. Information for participation and recourse for grievances is also not clearly communicated.<sup>28</sup> The structure of communication, according to the consumers, is still top-down; generally Councillors speak on behalf of their constituents.<sup>29</sup> In this regard, it is clear that the supply-driven approach does not allow consumers room to participate in critical matters such as those concerning water supply and sanitation services. In contrast, the demand-driven

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<sup>28</sup> This is a view of community members in the focus group discussions and an interview with the late Mr. Gcabashe, formerly the General Manager, Engineering services, EWS, conducted on 16/6/2007.

<sup>29</sup> This aspect exacerbates the already frustrating situation of unhappiness among consumers due to a general inefficient service delivery- an interview with Dudu Khumalo, formerly Regional Co-ordinator, SAMWU, water supply and sanitation services held on 6/6/2007.

approach does take into account the expressed needs of consumers (Wright, 1997).

There is a critical need for the Municipality to encourage more comprehensive participation of communities in basic service provision. Equally, important is the need to challenge the stereotype that informal settlement communities are unaware of what they want. This study challenges that mindset because, as discussed in Chapter 2, consumers know what is like to utilize a particular service and also can make meaningful contributions towards service improvement if only their voices are heard. Finally, the variety of committees and other processes that exist in the study area imply that it is feasible for the Municipality to reach a diverse number of consumers from all walks of life without necessarily creating or adding more structures and processes. What is needed is affirmation from the Municipality that the people's participation in issues of basic service delivery is important. Equally important, there is also need to demonstrate that it values consumers' concerns and it takes them seriously. This would go a long way towards improving the provider-consumer relationship.

#### **4.6.4 Perceived Relationship with the EWS**

Generally, consumers would be expected to have good relationship with their service provider, be it a mobile phone network company or health service institution or electricity company or even banks, as these institutions all need to maintain good customer relationships (Cant *et al*, 2006; Schoeman & Magongoa, 2004; Naidoo & Mosdell, 2004). Consumer demands are growing rapidly, and utilities have to change with the needs of the consumers (Naidoo & Mosdell, 2004). Empirical studies have shown that where the consumer's relationship with the service provider is healthy, conflicts are minimal and consumer loyalty is high (Collingnon & Venzina, 2000; Carr, 1990; DPSA, 1997).

In this study, the majority of respondents were satisfied with their relationship with the EWS. However there were perceived difficulties in terms of responses to consumer complaints and corresponding feedback to the consumer. Most of the problems associated with the response from the EWS related to the huge arrears that consumers had incurred over a period of time, as well as problems relating to reconnection fees. Even though the EWS has a call-centre to respond to these queries, the response time is usually slow and the majority of the respondents indicated that this delay in response time may mean long periods of time without water in their households.

Administrative cumbersomeness was another critical problem that consumers highlighted. The key administrative concerns related to delayed billing and communication about new products such as

debt relief facilities and existing payment options. In its customer charter, the EWS as a utility encourages consumers to lodge complaints with the senior officer or call centre if any service provided is not satisfactory. However, during focus group discussions the majority of the respondents claimed that they have neither seen nor heard about the charter. The EWS needs to bring information about how to lodge a complaint closer to the people it serves. For their part, consumers need to make more efforts to contact the EWS customer care services to lodge their complaints.

#### **4.6.5 Perceived willingness to pay**

As indicated in Chapter 2, when a utility provides good service to its customers, they become increasingly loyal to the utility. According to Naidoo & Mosdell (2004: 3), this loyalty “typically creates a ripple effect in the utility’s revenue collection”. Byrne (2000) argues that this customer satisfaction often leads to an increase in business dealings with the utility. Goodman (2000) and Naidoo & Mosdell (2004) further note that customers become interested in utilizing additional services and even increase their consumption of existing services. In this sense, in a demand-driven approach, clear links exist between the kind of service and the service benefits that consumers need and what they are willing to contribute in cash for the operation of the services. Admittedly, for the demand-driven approach to work effectively, cost-recovery is inevitable. Consumers ought to cover a certain share of costs relating to the provision of water and sanitation services (Mulenga and Fawcett, 2000). However, the majority of the people in the study area are poor and hence highly unlikely to afford payment. In this case, they become more marginalized by the cost recovery measures due to the cost of services. This phenomenon, one would argue, is a negative impact of the demand-driven approach. Unless the government provides affordable services to poor people, it will be challenging to recover costs as the demand-driven approach prescribes.

According to Schoeman & Magongoa (2004), factors such as the Municipality’s failure to render accounts timeously, its failure to adequately maintain infrastructure and services, and its failure to provide water consistently are key factors that influence consumers’ willingness to pay. In this study, respondents identified all the above factors and added other factors such as disconnections, irregular water provision, proper drainage systems, poor communication, the high cost of water and frequent blockages of drainage pipes and sewers.<sup>30</sup> The Municipality needs to monitor these issues closely in the future.

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<sup>30</sup> Focus group response conducted on 26/6/2007.

According to Hogrewe *et al* (2003), the failure to provide basic services in an efficient manner is due to the existence of institutions that have been organizationally structured to provide services in a supply-driven manner. Cardone & Fonseca (2003) argue that where there is a high likelihood of payment being enforced by the Municipality, consumers tend to understate their ability to pay, while where there is history of lack of enforcement of payment consumers have a high tendency to overstate both the ability as well as their willingness to pay for services (Schoeman & Magongoa, 2004). In this study, the majority of the respondents indicated that users must pay for the services provided to them, but expressed concern about certain areas where people receive water free. The Municipality ought to take a firm stance against such defaulters.

#### **4.6.6 Effective Management and Maintenance of a Clean Environment**

It is the responsibility of the Municipality to maintain a clean environment (Popat, 2003). This minimizes the possibility of outbreaks of disease that are related to uncleanliness such as cholera. In this study, the majority of the respondents indicated that their streets are always littered and they never see the municipal sweepers doing their work. In addition, there are sections in their areas where raw sewage is seen oozing from overflowing manholes or from blocked drainage pipes. Such a condition predisposes the community to health risks. The Municipality should ensure that streets are kept clean while blocked drainages are unblocked immediately. Routine maintenance should be done frequently.

#### **4.6.7 Civic Education**

Civic education is critical tool in enabling consumers to know and differentiate good from poor services (Popat, 2003). Consumers thrive on information and assess the quality of any service based on what they have been taught to be an acceptable service (Schoeman & Magongoa, 2004). In this respect, local Municipalities must make a considerable effort to educate their consumers. They should educate them about the services they provide, their responsibilities with regards to these services, the consumers' responsibilities towards the services received and the available mechanisms for recourse, in case of unsatisfactory services. In this respect, civic education entails both consumer rights and responsibilities (Goodman, 2000).

According to Davids *et al* (2005: 128), civic education can be conducted through workshops, focus groups, key stakeholder meetings, advisory committees and panels, citizen juries<sup>31</sup>, *imbizos*<sup>32</sup> and

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<sup>31</sup> A citizen Jurie is a small group of public representatives and stakeholders, brought together to learn and exchange information regarding a particular issue, cross-examine witnesses or experts and make recommendations. (Davids *et*

*indabas*<sup>33</sup>. However, such a reorientation of communities to a culture of learning is no mean feat. Mogale (2003) argues that civic education not only initiates a process of social learning which leads to consumer empowerment, but also leads to sustainable development. The more civic education is made part of the local municipalities' development agenda, the more consumers participate in development issues in their areas. Empirical studies have indicated that where civic education is prioritized, conflicts between local municipalities and consumers of basic services are reduced (Cook & Kothari, 2001; Ghai & Vivian, 1992; Gebremedhin, 2004).

#### 4.6.8 Community Responsibility

In South Africa, local government has the authority to render services of a local nature within a defined geographical area, to all communities within its jurisdiction (Parnell *et al*, 2002). The provision of services to communities in a sustainable manner is one of the developmental objectives that the Constitution of the Republic prescribes to all local governments (Davids *et al*, 2005). However, in order for the local government to realize its goals, communities are expected to support its initiatives. In order to construct sustainable human communities, communities themselves must assume responsibility for controlling their own resources and those provided by the government (Korten, 1990). This is essential because it creates a sense of responsible stewardship of resources within communities, hence sustainability (Oldfield, 2002). In this study, the majority of the respondents indicated a need to encourage the community to assume the responsibility of looking after the water and sanitation infrastructure in the area. This involves discouraging vandalism of water pipes and sewer covers as well as illegal water connections.

#### 4.7 CONCLUSION

This chapter has discussed the findings of the study in detail. Supply and demand-driven approaches to water and sanitation delivery have both merits and demerits. The key characteristic that distinguishes them is their inability to meet consumer demands. The supply-driven approach focuses more on rolling-out basic services to the public at a cost. The demand-driven approach encourages a consumer-orientation in the provision of services while putting an economic value on these services. The major difference between the two approaches is that because the demand-driven approach requires consumers to pay for the services they receive, the approach fails to cushion poor households that cannot afford to pay for them. Government's initiative of providing free basic water

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*et al*, 2005: 128).

<sup>32</sup> An *Imbizo* is an interactive governance aimed at partnership between government planners and stakeholders. (*ibid*).

<sup>33</sup> An *Indaba* is a forum for open and frequent dialogue between stakeholders to identify and address issues of common concern (*ibid*).

to poor households in the year 2000 was recognition of the fact that many South Africans cannot pay for the services (Mulenga and Fawcett, 2000). This phenomenon explains the reluctance of the government to adopt the demand-driven approach.

However, since there is a need to provide these services sustainably, efforts must be made to recover the costs. For a demand-driven approach to work effectively there must be efficient cost recovery mechanisms. In this sense, there is a likelihood that the poor will always be marginalized because they cannot afford to pay. Since the demand-driven approach is inherently linked to finance, the assumption is that the demand expressed by the poor can be equated to their willingness to pay for a particular kind of service. Even in surveys, it is difficult to ascertain with certainty that communities will actually pay for the costs of improved water and sanitation services. Therefore, a balance between these two approaches ought to be struck. The government must continue providing basic services and reconcile this provision with the demand for improved services with a limited ability to pay among urban poor consumers.

## CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

### 5.1 INTRODUCTION

This study aimed to examine consumer perceptions on water supply and sanitation services in Ohlange Township in Inanda, Durban. The central research objective was to interrogate whether supply-driven delivery system fully meets consumer demands. The study was guided by two theories highlighted in Chapter Two, namely, the demand-driven approach, which advocates that basic services be provided according to consumer demand, and the supply-driven approach, which is one where the government is the principle agent in providing these services. Based on the findings the study, (i) consumers perceived that water supply and sanitation services provided by the eThekweni municipality were dissatisfactory; (ii) consumer involvement in water supply and sanitation services delivery process was remote; (iii) and the state of water supply and sanitation services in Ohlange Township was not satisfactory. The study concludes that supply-led approach is severely limited in meeting consumers' demands satisfactorily while demand-driven approach allows consumers to participate in enhancement of the provision the services they require. These conclusions are explored in detail below guided by the set objectives. The chapter provides pertinent recommendations based on findings of the study.

### 5.2 Consumer perceptions towards water supply and sanitation services as provided by the eThekweni municipality

The study found that the majority of consumers were generally dissatisfied with the water supply and sanitation services provided by the eThekweni Municipality. This dissatisfaction arose from poor water supply and sanitation infrastructure in the area, a lack of capacity of efficient service delivery, billing problems, poor communication, poor sanitation services, too much red tape, poorly maintained streets, which are constantly littered, and lastly, perceived discriminatory service provision. In the light of these observations, the study concludes that the Municipality should address consumers' concerns and improve the services it provides to them. The aim is to ensure that they are satisfied with the services it offers. As was discussed earlier in Chapter Two, it is the responsibility of the local municipalities to provide a high quality and reliable water supply and adequate sanitation to their communities. In order for them to provide these services, they must understand the importance of establishing and maintaining good customer relations and services. A better understanding of these factors provides a firmer basis for minimizing conflicts between service providers and consumers. It also helps utilities to open spaces for dialogue between them

and the consumers. In this way, consumer concerns are heard and if reacted to proactively, they influence the way services are delivered. Information flow between utilities as service providers and consumers is critically important. Where information asymmetries exist, service delivery tends to be hampered. The issue of customer relations and customer service is a complex and multi-faceted one. It calls for proactive responses on the part of local municipalities that match services to the needs of consumers.

In cognizance of the fact that the demand-driven approach allows consumers to participate in influencing what kinds of services meet their expectations, understanding the linkage between what services need to be rendered and what consumers need is critically important. This is the reason why gathering consumer information about these services is important. One would therefore argue that success by water utilities as far as service delivery is concerned should be measured by how efficiently they gather this information, how they store it in their management information systems and how effectively they used it for making decisions for appropriate interventions.

In the light of the above discussion, the study recommends that the Municipality should:

- **Develop regular consumer satisfaction assessment exercises**

Although the Municipality (EWS) has mechanisms in place to assess the state of water supply and sanitation infrastructure, there is a lack of mechanisms to assess consumer satisfaction with regards to water supply and sanitation services. In the past, the Municipality has conducted “quality of life” and “consumer satisfaction on basic services” assessments. However, these assessments are not conducted regularly. They also do not cover all areas of the Municipality, and the views of certain sections of the populace are not captured. It is therefore recommended that such exercises be conducted on a regular basis and that coverage be broadened. These exercises create platforms for dialogue, which in turn allow consumers to bring their observations, concerns and suggestions to the attention of the Municipality (EWS). This enhances accountability, trust and the quality of decisions and outcomes. Together, the EWS and the community can decide on mutually agreed goals as well as define strategies to realize those goals, which both parties can remain committed to in order to ensure accountability.

- **Implement Environmental and Hygiene Awareness Campaigns**

The respondents claimed that their streets are littered with dirt and there are no visible municipal workers to sweep them on a daily basis. One would argue that even though the Municipality is responsible for maintaining cleanliness in community streets, it should be made known to the public that each person is responsible for maintaining a clean environment. The shifting of blame does not

correct the situation, neither does complaining. Environmental awareness campaigns contribute to changing people's perceptions about caring for their own environment. Such campaigns should be ongoing and should focus on educating the public on the importance of maintaining a clean environment and the benefits of keeping one's surroundings clean. They should also incorporate aspects of health and how the quality of people's health is compromised when people neglect to take care of their own environment. This implies that the Municipality must liaise with community leaders and other stakeholders in organizing such campaigns and invest in these capacity building initiatives.

- **Improve Communication and Information Dissemination Strategies**

Information is power. It enables people to make quality decisions about services or products. This is critically important even in providing basic services to consumers. The benefits of information flows far outweigh the costs associated with information asymmetries, which eventually hamper efficient delivery of basic services. The Municipality should strengthen existing forms of information dissemination such as pamphlets and local newsletters. According to the majority of respondents, the most preferred methods are ward committee meetings, newsletters, Councillors, public meetings, pamphlets and mails. Regular meetings with the community should be renewed where they are non-existent or under-utilized.

Furthermore, in order to deliver more consumer-responsive services to communities, the water utility should intensify its communication strategies with consumers. Although a customer charter that provides an avenue for the communication of any concerns exists, more proactive and creative options can be explored with respect to existing communication models. This may include, for instance, holding regular consumer feedback sessions. These kinds of stakeholder meetings open spaces for dialogue between the local municipality and communities. Tangible benefits of sharing and communicating with stakeholders may include minimizing incidences of conflict and improving consumer willingness to pay for services received. It is also important to note that once feedback is received from such engagements with consumers, it should be made public and acted upon.

### **5.3 Community Involvement in water supply and sanitation services delivery process**

The majority of respondents indicated that they are remotely involved in the water supply and sanitation services delivery process as far as decision-making is concerned. The EWS makes most decisions. This not only marginalizes communities but it also disempowers them and reduces their ability to actively engage with water utilities in identifying critical needs. It also diminishes their

potential to influence decisions made regarding provision of such basic services. Therefore, the municipality should:

- **Empower and encourage active participation of all people in decision making processes**

It is imperative the consumers be involved in making decisions that affect their lives at all levels of service provision. The Municipality should conduct regular meetings with the communities and allow them to express their concerns unhindered. In addition, the Municipality should also allow them to directly and actively participate in making decisions. This is by way of conducting formal consultative meetings with communities, which have the potential to create interest in participation. At the time of the study, participation in community forums was noted as lacking among the majority of respondents. This form of dialogue encourages good customer relations between the Municipality as the service provider and the communities as consumers of water supply and sanitation services. Other benefits of such dialogue may include reduced conflicts between the Municipality and the consumers; a shared ownership of decisions leading to enhanced accountability and better services; and lastly, increased transparency and access of information by consumers from the Municipality.

#### 5.4 The state of water supply and sanitation services in Ohlange Township

The state of water supply and sanitation services in the Township is not satisfactory. The majority of the respondents expressed dissatisfaction with various aspects of service provision such as billing of their water accounts, water interruptions, poor sanitary facilities, blocked drainages and poor maintenance of water infrastructure. The study recommends that the Municipality should:

- **Improve and Maintain the Existing Infrastructure**

There is a critical need to improve the water supply and sanitation infrastructure in the area. Financial resources should be set aside to improve aging pipes and also to build more public toilet facilities in the trading centres. Failure to pay adequate attention to such critical aspects eventually leads to conflicts between the utility and the consumers. Furthermore, the aging water supply infrastructure may predispose conditions that jeopardize the health of consumers. Corroded water pipes carry toxins that may prove harmful to the health of the consumers. As the old adage goes, 'prevention is better than cure'. The earlier these kinds of situations are prevented and avoided the better off the consumer will be. At the heart of the EWS' objectives is to ensure that consumers receive quality services without compromising standards. Sanitation infrastructure needs to be improved as well. The majority of the respondents in this study indicated that the quality of their

toilets is unacceptable. The Municipality should improve on the quality of the toilets built as well as accelerate the pace of delivery to those areas that lack such facilities.

- **Improve and Strengthen the Technical Capacity of Staff**

The study established that there is a need to strengthen the capacity of the EWS in attending to technical complaints by consumers. It is imperative that the EWS invest in the technical capacity of its staff, especially those in the engineering services. Inadequacy in such technical departments translates into delayed responses to consumer problems such as leaking pipes or blocked drainages. Financial resources should be set aside for this purpose and ways to partner with other institutions such as technical colleges and universities should be explored. Such partnerships are useful especially where technical capacity is needed and also for in-service training.

- **Enforce Cost Recovery**

Even though the consumers expressed concerns over delayed billing of water accounts, the delay does not exonerate them from the responsibility of paying for water consumed. Therefore, the Municipality, while improving its services, should also enforce payment of services rendered. This study found that majority of those who are unwilling to pay for their services were those who were unhappy with the existing infrastructure such as leaking pipes, blocked drainages, insufficient public water points or toilet facilities. Of course one would treat such responses with caution, as community members either overstate their willingness to pay or understate the amount that they are able to contribute. However, this is where contradictions in policy and in operation between the right to water and citizenship entitlements such as Free Basic Water (FBW) occur. A policy such as FBW entitles all people to a free lifeline of water supply of six kilolitres per household; or 200 litres per household per day; or 25 litres per eight-member household per day (DWAF, 2002). Even though the policy has been lauded as a landmark achievement with respect to citizenship and socio-economic rights, its implementation has been difficult, faced with a range of obstacles, among them lack of financing and institutional capacity at the local government level. Due to the financing challenges that most local governments face, provision of water has become increasingly expensive.

Since the FBW policy is dependent on the availability of resources from the public budget, it is only sustainable if it is accompanied by cost-recovery mechanisms and strict credit control mechanisms (Smith, 2003; Wright, 2002). These mechanisms require that citizens pay more through taxes and rates, and the poor suffer even more due to their economic constraints. Since local governments have to recover their costs, a strict commercial relationship between the utilities as service providers and citizens as consumers is established. This phenomenon does not work in favour of the poor and it raises concerns as to whether having the right to water makes a difference to poor people.

However, in order for the right to water to be realized by all people, especially the poor, there is a critical need for adequate resource commitments, both financially and institutionally at the local government level.

However, the onus is still on government to provide the services. This attitude of “something-for-something” has the potential to make the implementation of cost recovery extremely problematic. But this does not mean the Municipality should not encourage people to pay for services rendered. The Municipality should ensure that people know that failure to pay for water supplied and other products means withdrawal of the services until obligations are honoured. This should be seen visibly so that communities will take the Municipality seriously. With the budget constraints facing the Municipality, there is little that can be done to accelerate the provision of basic services to all who need them if costs cannot be recovered. Where it can be proven that particular individuals cannot afford to pay, the Municipality may consider giving some subsidies. However, the provision of subsidies should be balanced with the need for full cost recovery. In this sense, the Municipality should undertake an exercise to establish those who are genuinely unable to pay for such services.

## 5.5 SCOPE FOR FURTHER RESEARCH

This study is not a pioneer study in its area but rather has contributed to the existing body of empirical work that relates to water supply and sanitation services in South Africa. Though the findings of the study cannot be generalized to other communities in the country, it provides an insight into the issues that such communities, as consumers of water supply and sanitation services, are grappling with. The study has identified the following areas with potential for further research:

- Consumer satisfaction should be examined from time to time. This is because consumers are dynamic and so are their tastes and preferences. It is important to acknowledge that the Municipality has in the past conducted comprehensive quality of life surveys that also examine consumer satisfaction as far as basic services are concerned. However, this study recommends periodic assessments of consumer satisfaction specifically in water supply and sanitation services. This is important even for monitoring purposes.
- There is a need to investigate whether the right to water makes a difference to poor people and their livelihoods, in the context of the Free Basic Water policy in the face of cost recovery trends. This investigation should explore further whether there are any inherent contradictions between rights-based and market-based policies contextualized within the existing institutional, administrative and policy environments as far as FBW is concerned in South Africa.

## 5.6 SUMMARY

This study revealed interesting findings that contribute to the existing body of knowledge in this research area. The study is topical and relevant to the present circumstances the country finds itself in. Service delivery is at the heart of the political discourse of the country. The pace of delivery is still perceived to be slow compared to the growing needs of the population. At the same time, the government, as the principal agent of providing these basic services to the consumers, continually faces the challenge of balancing its constitutional mandate of providing all citizens with basic services and the demand for improved services with a limited ability to pay for them among the poor. It is critically important that the government continue investing in consumer satisfaction assessments at all levels of government, as well as researching the development of satisfaction indicators. This will assist in matching services to consumer needs. Thus the findings of this study provide some insights that can be explored through further research.

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## APPENDICES

### APPENDIX A:

#### **THE RESEARCH ASSISTANTS' ORIENTATION WORKSHOP<sup>34</sup> HELD ON 5 MAY 2007**

##### AGENDA FOR THE DAY

- a) Introduction to the workshop.
- b) Introduction of participants- ice-breaker.
- c) Objectives of the workshop and its proceedings.
- d) What is a research?
- e) The process of research.
- f) Who gets involved in the research process?
- g) How to conduct interviews.
- h) Data collection procedures and analysis.
- i) After analysis- what to do with results?
- j) Evaluation of the workshop

##### 1. WHY THE NEED FOR RESEARCH?

Research is not just for scholars but involves a whole range of stakeholders, which includes communities. In this research specifically, community perceptions on water supply and sanitation services are critical. It is assumed that communities as end users of the above mentioned services would provide valuable feedback that could be used to improve service delivery as well as decision and policy making.

##### 2. PROCESS OF RESEARCH

It is important as a researcher to start thinking strategically about why and how the research will be done. It is also useful to get inputs from people who have been involved in such processes before and incorporate their experiences.

##### 2.1 First Step: PROPOSAL.

- Introduction to research problem (the current situation)
- Importance of study
- Research problem (e.g.) Consumer dissatisfaction with service delivery

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<sup>34</sup> This orientation format was chosen because it offered a comprehensive understanding on what entails a research and data collection techniques. It was adopted from Smith, J (2003:1).

- Conceptual framework (identify links and issues)
- Delimitations (one cannot investigate everything-it is important to state what will and what will not be included).
- Assumptions (this means, what will be taken for granted).
- Methodology (how will data be collected e.g. interviews, questionnaires, focus groups?)
- Work plan/time frame

## 2.2 Second Step: RESEARCH BEGINS

- Literature review – current situation/ ideas/ previous research conducted in the same area (municipal, government or other relevant documents, internet, other community groupings, informal discussions). The literature review must be as comprehensive as possible, capturing all important information relating to the study.
- Involve interested individuals in the research process. This selection must be strategic, only involve those individuals who are interested to move the process forward.
- Methodology – it is important to know those people the researcher is intending to interview such as community members, area councillors, service providers, how many people (sample size). Also it is critical to identify possible research techniques such as surveys, interviews (face-to-face), focus groups, community meetings, documentation – government, municipal records and community records.
- As the researcher, choose your technique. One may use different techniques concurrently.
- Prepare questions to be asked in the interviews. Always ask generic demographic questions such as the number of people in the household, ages, gender, occupation etc. Ask one question at a time, slowly building confidence from your respondents/interviewees. Always remember that the person who asks the questions determine the type of responses that the interviewee will give, so try to ensure that you are succinct and precise in asking the questions.
- 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).

## 2.3 Third Step: DATA COLLECTION TECHNIQUES

Includes structured interviews, focus groups, and face-to-face interviews.

1. Outline the objectives of the research - to investigate water supply and sanitation service delivery status in the study area; to investigate communication between residents, municipality, area councillor; to look at the service delivery framework.
2. Prepare to conduct interviews – introduce yourself (who you are, what organization you are

representing, why are you conducting the interviews); ask permission to conduct the interview and state how long the interview will take; make the interviewee at ease and comfortable; emphasise that the interview will be confidential; be neutral; be interested and ask for clarification if necessary; record exact responses; probe if there is a silence; know your questions well, familiarize yourself before; stop the interview if it is going badly; evaluate why the interview is going wrong and move to the next household; finally thank the interviewee for participating and end the interview.

### 3. DATA ANALYSIS

- Statistical analysis will be done. This will be done using SPSS where necessary.
- The research findings will then be explained in detail and what it means to us.
- Identify any gaps- maybe more information is needed for clarification, more interviews with different stakeholders etc.

### 4. AFTER ANALYSIS – WHAT TO DO WITH RESULTS

- May need to publish the results.
- May want to extend the research (if necessary).
- May need to workshop certain issues – facilitate understanding about the importance of involving communities as end users in policy and decision making processes of the local government.

### 5. EVALUATION OF DAY ONE

- Where are we now?
- Evaluate the day's agenda and proceedings.
- Time frames- who does what, when, how
- The etiquette needed during the data collection period- researchers' presentation must be beyond reproach.
- Revisit any areas that may need clarification such as methodology, data collection techniques, asking questions.

## APPENDIX B

### RESEARCH QUESTIONNAIRE

**RESEARCH TITLE: Examining consumer perceptions on water supply and sanitation services. A Case study of Ohlange Township, Durban, South Africa**

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#### Section A. Introduction

- Place of interview \_\_\_\_\_
- Date of interview \_\_\_\_\_
- Contact details \_\_\_\_\_

#### Section B. Individual information

- How old are you? \_\_\_\_\_
- Gender
  - 2.1 Male
  - 2.2 Female
- Marital status
  - 3.1 Married
  - 3.2 Single
  - 3.3 Divorced
  - 3.4 Separated
  - 3.5 Widow/widower
  - 3.6 Never married
- Number of people in the household  
\_\_\_\_\_
- Age of the members of the household  
\_\_\_\_\_
- Occupational status
  - Employed
  - Self employed
  - Unpaid family worker
  - Other
- Educational qualifications

- 7.1 No schooling
- 7.2 Grade 1 to grade 8
- 7.3 Grade 9 to grade 12
- 7.4 College
- 7.5 Degree
- 7.6 Post graduate degree/Diploma
- 7.7 Other (specify)
- 7.8 Don't know

**Section C. Information on water**

- What is the source of your drinking water in your household

- 1.1 Piped (Tap) water in dwelling
- 1.2 Piped (Tap) water on site or in yard
- 1.3 Neighbours Tap
- 1.4 Borehole on site
- 1.5 Rain water tank on site
- 1.6 Public Tap
- 1.7 Water career/tanker
- 1.8 Dam
- 1.9 Well
- 1.10 River/Stream
- 1.11 Water vendor

- Do you get water regularly?

- 2.1 Yes
- 2.2 No

3. What do you think of the quality of your water?

- 3.1 Excellent
- 3.2 Good
- 3.3 Fair
- 3.4 Poor

4. How would you say your water looks like?

- Coloured
- Colourless
- Other (please indicate)

5. Are you aware of free basic water?

- 5.1 Yes
- 5.2 No

6. Do you pay for your water consumption?

- 6.1 Yes
- 6.2 No

7. Would you say that the price of water is fair?

- 7.1 Yes
- 7.2 No

8. Do you receive water bills regularly?

8.1 Yes

8.2 No

9. Do you pay for your water bills?

9.1 Yes

9.2 No

10. If no, why?

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11. Are water bills easily readable?

11.1 Yes

11.2 No

Please explain your answer

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12. Would you say that your water bills are accurate?

12.1 Yes

12.2 No

Please explain your answer

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13. Do you think the government should provide free water to everybody?

13.1 Yes

13.2 No

14. Do you think the government should provide free water to those who cannot afford to pay for their water bills only?

14.1 Yes

14.2 No

15. Are water interruptions generally a problem in this area?

16.1 Yes

16.2 No

16. What normally causes these interruptions?

16.1 Burst pipes

- 16.2 Pump not working
- 16.3 General maintenance
- 16.4 Not enough water in the system
- 16.5 Water only delivered at fixed times
- 16.6 Non payment for services
- 16.7 Vandalism
- 16.8 Don't know
- 16.9 Other (Please specify)
17. Would you say water from the main source is safe to drink?
- 18.1 Yes
- 18.2 No
18. Would you say water from the main source is clear?
19. 1 Yes
- 19.2 No
19. Would you say water from the main source tastes good?
- 19.1 Yes
- 19.2 No
20. Would you say water from the main source is free from odours?
- 20.1 Yes
- 20.2 No
21. Would you say that water pressure is:
- 21.1 Excellent
- 21.2 Good
- 21.3 Fair
- 21.4 Poor
- 21.5 Very poor
22. Are there burst pipes in your area?
- 22.1 Yes
- 22.2 No
23. Would you say that EWS responds to burst pipes in a timely way?
- 23.1 Yes

- 23.2 No
24. Are you aware of any illegal water connections in your area?
- 24.1 Yes
- 24.2 No

**Section D. Health related**

1. Are there standing pools of water in your area?
- 1.1 Yes
- 1.2 No
2. Do you know anybody who has been ill from water related sickness?
- 2.1 Yes
- 2.2 No
3. Would you say water contributes significantly to community health and well being?
- 3.1 Yes
- 3.2 No

**Section E. Information on sanitation.**

1. Do you have a toilet?
- 1.1 Yes
- 1.2 No
2. What type of a toilet do you have?
- 2.1 Pit latrine without ventilation pipe
- 2.2 Pit latrine with ventilation pipe
- 2.3 Flush toilet
- 2.4 Improved pit latrine
- 2.5 Chemical toilet
- 2.6 Bucket toilet
- 2.7 None
3. What type of sewer is connected to your house?
- 3.1 Planned
- 3.2 Unplanned

4. Does water supply problem affect you as far as the type of toilet you have is concerned?

4.1 Yes

4.2 No

5. Are you aware of toilet emptying services in this area?

5.1 Yes

5.2 No

6. If yes, have you ever used it?

6.1 Yes

6.2 No

7. If yes, what system of emptying did you use?

7.1 Shallow sewerage

7.2 Small-loose sewerage

7.3 Conventional septic tank

7.4 Conventional sewerage

7.5 Other

8. If yes, did you pay any money for that service?

8.1 Yes

8.2 No

9. If no, did you contact EWS for assistance?

9.1 Yes.

9.2 No

10. How do you dispose solid waste?

10.1 Rubbish pit

10.2 Burning

10.3 Other

11. How do you dispose waste water?

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12. Is the municipal responsible for garbage collection?

12.1 Yes

12.2 No

13. Please give any other information concerning water and sanitation problems in your area.

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**Section F. Service related**

1. Would you say that EWS service staff is helpful in attending to water and sanitation problems in your area?

1.1 Yes

1.2 No

2. Would you say EWS responds effectively to your concerns on water and sanitation issues?

2.1 Yes

2.2 No

3. Have there been any conflicts between EWS staff and people living in this area?

Yes

No

4. Do you think it is necessary for EWS staff to work with armed guards?

4.1 Yes

4.2 No

5. Do you think water supply and sanitation services in this area are as good as other areas?

5.1 Yes

5.2 No

6. How would you rank EWS water supply services in your area?

6.1 Excellent

6.2 Good

6.3 Fair

6.4 Poor

6.5 Very poor

**Section G. Behaviour and actions.**

- 1. Are there any community forums in the area?
  - 1.1 Yes
  - 1.2 No
- 2. Are water supply and sanitation issues discussed in the community forums?
  - 2.1 Yes
  - 2.2 No
- 3. If yes, do the concerns raised in these forums reach the municipality?
  - 3.1 Yes
  - 3.2 No
- 4. If yes, would you say that the municipality takes your concerns seriously?
  - 4.1 Yes
  - 4.2 No
- 5. Do you think water supply and sanitation services in the last five years have:
  - 3.1 Improved
  - 3.2 Worsened
  - Stayed the same
  - I don't know

**Section H. Hydro political context.**

- 1. Who do you think makes important decisions on water supply and sanitation services in your area?
  - 1.1 EWS
  - 1.2 Businesses
  - 1.3 Community
  - 1.4 International organizations
  - 1.5 Other (Please specify)
- 2. Would you say that other residential areas in eThekweni get different services based on discrimination?
  - 2.1 Yes
  - 2.2 No

**Section I. Service improvement.**

1. Would you say that water and sanitation in your area have promoted equality regardless of one's status in the society?

1.1 Yes

1.2 No

2. When you think about water supply and sanitation infrastructure in this area in relation to other areas, would you say it is:

2.1 Better

2.2 The same

2.3 Worse

3. What would you suggest EWS could do to improve water supply and sanitation services in your area?

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4. What would you suggest the community could do to improve water supply and sanitation services in your area?

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5. What is your attitude towards water conservation?

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