WATER SUPPLY SERVICES IN GREATER TZANEEN MUNICIPALITY: A CASE STUDY OF LENYENYE TOWNSHIP

by

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[redacted]

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DECLARATION

I, Letsoalo Masilo Simon, I declare that the dissertation submitted to the University of Limpopo, for the degree of Master of Development, in the Graduate School of Leadership Faculty of Management and Law has not been previously submitted by me for degree at this or any other University, that it is my work in design and in execution, and that all material contained here in has been duly acknowledged.

LETSOALO, MS (Mr)

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DEDICATION

In memory of my late wife Rarane Elsie Letsoalo (1963 – 2008) beautiful and useful people quickly pass on. Your passing on was never expected, you left me with our children, and this really gives me courage to dedicate everything I do to you to make indelible footprints in our lives.

We will always cherish your smile and simplicity in our lives.

We truly miss you and we shall miss you all the time. May your soul rest in peace.

ACRONYMS AND ABBREVIATIONS

CMA: Catchment Management Agency
CMS: Catchment Management Strategy
DPLG: Department of Provincial and Local Government
DWAF: Department of Water Affairs and Forestry
FBW: Free Basic Water
GTM: Greater Tzaneen Municipality
IWRM: Integrated Water Resource Management
IDP: Integrated Development Plan
LED: Local Economic Development
MDGs: Millennium Development Goals
NWA: National Water Act
NGO: Non – Governmental Organization
NEPAD: New Partnership for African Development
OAU: Organization of African Union
RDP: Reconstruction and Development Programme
SA: South Africa
SADAC: Southern African Development Community
SALGA: South African Local Government Association
WHO: World Health Organization
WMA: Water Management Agency
WSA: Water Services Authority
WSP: Water Services Provision
WSSP: Water for Social and Sustainable Development
WR: Water Resource
WRC: Water Research Commission
WUA: Water User Association
UN: United Nations

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ABSTRACT

The aim of the envisaged study is to investigate the water supply services in Lenyenye Township, in Greater Tzaneen Municipality and to derive suggestions and recommendations for improvement based on the objectives decomposed into the following:

To review the extent and the magnitude of Water Supply problems and to identify, analyze the underlying causes of the water supply problems because the basic infrastructure provision of water supply is very poor and dismal across the area. Water serves as a basic need to which everybody has the right to access, be it for consumption or irrigation this service is, unfortunately, disrupted by many factors.

The findings in the study for poor water supply emanate from many common causal factors such as management skills, technical challenges and illegal connections.

Only two methods were employed to collect data in the study. Data collection was done by using the questionnaire and the interview methods and the interview involved direct personal contact with the participants who answered questions. A survey questionnaire was used to obtain data pertaining to water supply services from the representatives of water supply institutions.

Recommendations in the study are based on the findings such as prioritization of effective water supply for Lenyenye township, community consultation and participation, addressing capacity constrains in the Municipality such as human resources, water service infrastructure, and skills development.

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CHAPTER 1

1. BACKGROUND TO THE STUDY

1.1. Introduction

The transition to democracy in South Africa is characterized by many challenges, one of which is to improve the lives of the people by providing them with basic resources, such as water, for their survival. For the human it is a fact that water is indispensable for both human survival and economic development. As the population and the economy grow, the demand for water as well grows. This puts a strain of the available water resources (Water Resource Management Report, 1996).

South Africa is known worldwide as a semi – arid region with uneven distribution of rainfall. Some of the areas have a high rainfall and are wet while others are dominated by drought. According to DWF, (1994) around twenty one percent of the country receives less than 200 millimetres of rainfall while sixty five percent gets less than 500 millimetres of rainfall annually. The National Water Act (N0.36 of 1996) specifies that the government, as a public trustee of the nation's water resource, must ensure that water is well conserved, developed, protected, managed and used in a sustainable and equitable manner for the benefit of all persons, DWAF, (1999).

The Minister of water affairs and forestry announced in February 2001 that, Government has decided to supply every poor household with free basic water. He said that cabinet had approved a policy to provide 6000 litres of clean water per household per month.

The Water Service Act of (2000) emphasizes that the primary point of consideration in the water service is the provision of basic water supply to all households without interruptions. Rapid population growth and the demographic changes are problems that put pressure on limited water as a resource (WRC; 1997:4).

Free basic water (FBW) policy which was launched in the year 2000 was challenged by some critics such as for its failure, especially in the most impoverished Municipalities in the rural areas. In terms of Water Services Act 108 of 1997, water provision is meant for those who cannot afford to pay for the basic water services at the organs such as Department of Water Affairs and Forestry, Municipality and the water board.

In Lenyenye Township, there is a serious problem of water shortage and this has a negative impact on households, the businesses, schools, churches in that these centres of activity find it difficult to operate effectively and healthy as they depend on water to flush their toilets. While water shortages are more prevalent in the area, consumers are expected to pay for poor services as required by Municipality by – laws of controlling services in South Africa.

According to strategic framework Supply Service Act of 2003, water has the following percentages of distribution: 72 percent of water is being used in the urban areas, while 12 percent goes to the rural areas, mining and industries consume 16 percent of it. This uneven distribution of water supply is a challenge to the ruling government in South Africa for the optimum utilization of water in the country (DWA, 1997).

In an attempt to alleviate this problem, government came up with a strategy of supplying needy households with 6000 litres of water per month. The Free Basic Water Policy was crafted and the costs are covered through subsidy from both wealthier water users and national taxes.

Urban areas of South Africa are accustomed to receiving all water they require with relatively low cost and without water supply problems or interruptions and with improved quality and are reliable in terms of international standards (Stevenson, 1996: 291). In 2001, Free Basic Water Policy was introduced to assist in the provision of services including water.

In 2001, former South African President Mbeki once said “the provision of free basic services such as electricity and water to people will alleviate the plight of the poorest among us” (Mbeki: 2001).

South Africa has middle status in terms of development. But half of its citizens lack adequate clean water, nutrition and education. It is these conditions which have led to the establishment of the Reconstruction and Development Programme (RPD). The objective was to reach the target of providing 25 litres of water per person per day which is the minimum of the requirement for cooking and personal hygiene (DWAF, 1994).

A single water sector was established to ensure that all communities in South Africa have access to water services and liaise with the service providers to account for the cost-effective and viable of services to all people (DWAF, 2003). Government has developed various policies and strategies geared towards addressing the past imbalances and skewed distribution of services.

In terms of Water Resource Management, government developed the National Water Act (Act 36 of 1998) which provides the principles of water management. The objectives of this policy is to manage water resources in an integral manner that will ensure a healthy and stable water base to meet the current and future needs in South Africa.

Policies and legislatives frameworks on water supplies and services which are formulated, resulted in “Batho Pele” principles as a sign of readiness to deliver services to people. Municipalities have been assigned with the responsibilities to deliver the services to communities (DWAF, 2003: 19).

The 1996 Constitution of South Africa also emphasises that every citizen has a right to access basic needs such as food, and shelter which are to be provided to people irrespective of colour, creed or gender. This means that services such as water are part of the resources no one can live without. Disappointingly, such resources are not provided as expected to the people of Lenyenye Township.

1.2. PROBLEM STATEMENT

Water scarcity is a South African reality. This country has an annual rainfall with an average of 500mm as opposed to the world's average of 860mm. In addition to the low rainfall measured in the country, it is seasonal and unevenly distributed in various districts. Due to this, South African Government has planned to provide safe portable water to all its citizens.

The provision of water and sanitation to the previously un – served majority of the population is a priority development goal in South Africa and is one of the important goals of the World Millennium Development Summit of 2000. In terms of the targets, the United Nations aims to reduce by half the water scarcity by the year 2015 and reduce the proportion of the people without sustainable access to safe drinking water.

In South Africa, the government is committed to reducing the backlog of service delivery by 2008 in the case of water supply services, and in 2010 the reduction of the sanitation ones. (Strategic Framework for Water Services, 2000).

Lenyenye Township is experiencing water supply problems which became more acute since 1994. As a township in South Africa it is also governed by the by – laws which are being exercised by the council. Water shortages are evident in the households, in businesses and other institutions such as schools and crèches where healthy problems might arise because of water shortages.

1.3. MOTIVATION FOR THE STUDY

This research is motivated by the ongoing and worsening water supply services that are deteriorating in the area of study as compared to the surrounding villages in the same jurisdiction of the Municipality. Further motivation has resulted from the peoples expectation of better life for all from the government. As a scholar, one lived with the anticipation of an improved life where sanitation and water supply services would satisfy the community.

1.4. AIM OF THE STUDY

The aim of the study is to investigate the water supply services in Lenyenye Township; in Greater Tzaneen Municipality; and to come up with suggestions and recommendations for improvement.

1.5. OBJECTIVES OF THE STUDY

The aim of the study is collapse into the following objectives:

- Personal profile of respondents
- Situation analysis and the status of Water Supply Services in the Township of Lenyenye
- Perception of the consumers on quality and quantity of water supply and services
- Lack of community participation and adequate consideration in water supply service
- The different uses of water
- The water supply constrains and the impact on consumer as respondents
- The community's perceptions on the effectiveness of the Municipality in dealing with water supply challenges
- The expectations of the community with regard to solutions to the problem of water supply service
- Satisfaction with water supply services in Lenyenye Township or not satisfied.
- Poor Local Governance
- Capacity challenge at Local Municipality
- Vandalism and Illegal Water Connections
- Inadequate Water Supply infrastructure

1.6. RESEARCH QUESTIONS

The main research questions of the study are as follows:

- What is the perception of the consumers on the quality and quantity of Water Supply Services in Lenyenye Township?
- Which consultative processes and mechanisms have been put in place by the Municipality to improve water supply services?
- What are the different uses of water as a resource in the area?
- How is the situation being analyzed by the consumers on the status of Water Supply Services in Lenyenye?
- What are the water supply constraints and their impact on the consumer as respondents?
- Is the community satisfied with water supply services in the township?
- What are the consumers' expectations from the Municipality concerning solutions to water problems and supply?
- Does the community participate in water related problems? If so, is the participation adequate?
- Are there indications for poor Local Governance in the Municipality?
- How often is vandalism and illegal water connections being reported?

1.7. SIGNIFICANCE OF THE STUDY

The study will contribute to the knowledge construction in terms of factors behind the problems of water supply services in the township. Basic infrastructure provisions of water supply and sanitation are dismal in Lenyenye Township and there is a potential growth of the population with high demand for services which exert tremendous pressure on the already fragile conditions.

The study is significant as it will try to make the community of Lenyenye to be aware of their rights and roles as stakeholders to services and make sure that they have access to clean portable water.

One finds it important because it aims to foster mutual co-operation between Greater Tzaneen Municipality and the community of Lenyenye by making some information or literature about water related issues available for scrutiny by the public.

1.8. DEFINITION OF CONCEPTS

Catchment Area

According to Jean de la Harpe (1985: 15) Guide to National Water Act, it is an area or land from which rainfall will drain into the water course through surface flow. For example, a river to a common point of flow.

Catchment Management Agencies

A Catchment Management Agency (CMA) is a statutory body established in terms of National Water Act 36 of 1998 and has governing board appointed by the Minister for purposes of managing water resources.

District Municipality

This is a municipality that has a mutual executive and legislative authority in the area that includes more than one Municipality and which is described in Section 155 (1) of the Constitution as a category Municipality (Republic of South Africa, 1988: Sec 20).

Household

This means a family unit determined by the municipality constituting a traditional household by taking into account the number of persons in the house, the relationship between the members of a household, age of the persons who are members of it and any other factors that the Municipality considers to be relevant. For an example, living together. Water Services By - Laws (DWAF2005:42).

Local Municipality

A municipality that shares mutual executive and legislative authority in its area with a distinct municipality with those areas under which it falls. It is described in Section 155 (1) of the Constitution (Republic of South Africa) Sec (xx 111).

Premises

This means any piece of land, the external surface boundaries of which are delineated on a general plan or diagram registered in terms of the Land Survey Act, 1927 (Act No 9 of 1927) or in terms of Deeds Registries Act (Act No 47 of 1937).

Water Board

According to Water and Sanitation Business Journal March, 2001, it is an organ established by the Minister of Water Affairs in terms of Water Services Act 108 of 1997 to perform its primary duty of water provision (WRC, 1997: 15).

Water Services Authority

A water service authority is any Municipality that has executive authority to provide water services within its area of jurisdiction in terms of the Municipal Systems Act 118 of 1998 (DWAF, 2003: 15).

Water Service Provider

According to Ronnie Kasrils, in “Strategic Framework for Water Services 2003” it is any person who has a contract with Water Services Authority or another service provider to sell water or accept waste for the purposes of treatment from bulk water services provider.

Water User Association

According to Jean de la Harpe in (A guide to National Water Act, 1998) Water User Association is a statutory body established by the Minister or a group of water users who wish to work together. Because of a common interest they co-operate in undertaking water related activities at local level for mutual benefit.

CHAPTER 2

2. LITERATURE REVIEW

2.1. Introduction

Water delivery constraints have been a world – wide challenge. The study presents a review of literature and it begins by articulating the theoretical arguments on the role of water as a basic need.

The importance of water in the economic sector, the role of water in development, of policy and legislative frameworks, situation analysis and backlog are the major reasons for poor water supply services in Lenyenye Township and the entire South Africa.

In South Africa, water is treated as a social basic need. It is recognized as essential for sustaining life and is a commodity on which people and the entire aquatic environment have a protected legal right. However, it is also recognized as good for the economy, use of which has a major impact on the creation of wealth and the well-being of people (Water Research Commission: 2004 / 5:261).

Literature review is important in familiarizing and to comparing opinions of scholars through documents such as books, journals, policies, legislative frame work and other information related to water supply services. Significant problems remain concerning the financial sustainability of service providers which led to lack of attention to maintenance.

2.2. WATER AS A BASIC NEED

Todaro and Smith (2003:21) argue that all the people have certain basic needs and without water life would be impossible. This life – sustaining basic human needs include food, shelter, health and protection. If any of these resources is absent or, is critically short of supply, a condition of absolute underdevelopment exists.

Prasad (2003: 251) indicates that water as basic need, is used as follows:

- Water for drinking and sanitation.
- Water for food which serves in agricultural products.
- Water for fauna and flora and water for industries and other uses, like power generation, industry and mining projects.
- Water is also used for religions processes of ascertaining the baptismal activities of churches.

Water as a basic need is there for certain purposes such as domestic use as in drinking, washing, bathing and to some extent, water may be used to earn an income such as cultivating a garden, field crops and livestock, brick-making in the rural and semi-urban areas. Prosperity for South Africa and other countries depends upon sound management and utilization of many resources, with water playing a pivotal role. The industrial growth of any country depends on accessibility of adequate water resource. Therefore, water is life, water is development (Basson 1997:1).

Water is also mainly used in agriculture, for instance, water is needed to produce food, fibre, fuel-wood and timber. Such use can help to reduce poverty and increase the earnings of people who depend on water based agriculture, including subsistence, emergent and commercial farmers (WRC, 2004: 12).

Water plays a role in all aspects of life, in the international and national environments, in our economy, in food security, in production and also in politics. This water has a special significance not only in the preservation of life and in the fulfilment of our goals for economic growth. It is recognized worldwide as the most indispensable of all natural resource (Blingnault & de Wet, 2004: 206).

It is against this background that some of the targets that the Millennium Development Goals wants to meet and to see to it that the number of people without sustainable access to safe drinking water and sanitation is halved by 2015 (Visser, and Mbazira, 2006).

In South Africa, water services are a critical component of the development of communities. A large part of the country is dry and dependent on the capacity of local government to provide water to households (Basson, 1997:10). DWAF and local municipality which are assigned the status of being water service authorities should see to it that communities are provided with sustainable water service to enhance their livelihood. DWAF, as the custodian of water resource, should ensure that adequate water storages are created as it will ensure effective, reliable delivery of water to communities.

2.3. THE IMPORTANCE OF WATER IN THE ECONOMIC SECTOR

The social and economic development of every country relies on the availability of water for the growth of the economy. Many factories in the world rely on water to operate their activities. Such water includes water for agriculture, mining industries, recreation and tourism.

2.3.1. Agricultural Activities

In most developing countries, agriculture is found to be the basis for survival. It is the area of development which contributes most to employment and job creation throughout the food production chain. Secondary and primary industries such as transport, preservation and packaging, are also supported by the agriculture sector.

Agricultural sector accounts for about 62% of water utilization in South Africa. It supports a significant portion of the South African economy and contributes to rural development. In addition to supplying the local market with staple foods, such as wheat, maize, potatoes vegetables and various fruits, much agricultural produce is exported. The social value of agriculture should thus be emphasized because of its major contribution to food and job creation (DWAF, 2004:6).

Besides assuring food security for the country, the agricultural sector contributes to employment and job creation throughout the food production chain. Water is a primary input into agriculture, it has an important role in the sector because without irrigation it will not take place and any efforts will prove fruitless. Even though fertilizers and seeds are available for

farming, without water, there will not be any products. The sector will, therefore, not be able to create jobs, food user security will be less and people will be prone to diseases and malnutrition.

Agriculture is the largest user of water in all regions of the world except Europe and North America. In 2000, agriculture accounted for 70 percent of water withdrawals and 93 percent of water consumption worldwide where consumption refers to withdrawals net of returns flows and evaporation.

This is in contrast to industry, which accounted for 20 percent of water withdrawals and 4 percent of consumption worldwide in 2000 and household use, which accounted for 10 percent withdrawals and 3 percent of consumption. The water requirements of agriculture are large relative to water requirements for other human needs. (Department of Water Affairs and Forestry: Water Conservation and Demand Management Strategy for Agriculture Sector, 2004:6).

Brenos (2006:79) states that agriculture is essential for the alleviation of poverty, generating income and employment, bringing about food security and sustaining a buoyant domestic market for industry and services. In addition, Hossain (2001:4) argues that food is a major component of the consumer basket of poor households and their share of food depend not only nominal incomes but also on the level of food prices. The growth in agricultural productivity is based on which rural no-farming sectors develop. Agricultural development makes a critical contribution to the overall economic growth in many developing countries.

2.3.2. Recreation and Tourism

Most recreational activities and tourism as an industry, rely on water specifically natural water resources. Hale M and Lachowicz M (1998: 25) indicated that tourism is the biggest industry in the world. It depends on the environment for its continued existence and success, and has a responsibility to the economies, and cultures found throughout the world.

Hale *et al* (1998:24) argue about how the value of water of recreation can depends upon a number of factors such as the location, accessibility, scenic setting and water quality. Water that is available for recreation and tourism purposes is under strict control as it is a resource for the nation, as the reserved areas are used for tourist attraction which boosts the economy of a country like as the crowds of people visiting the warm coastal areas of South Africa like in Durban.

Boating and other games are common sporting activities that are mostly water reliant. These sporting codes take place in the big dams and in the oceans where a large volume of water is stored. One would realize that such water masses need to be protected against pollution by other water users. Pollution prevention is part of protecting the water resource.

2.3.3. Mining and Other Industrial Activities

Mining forms part of rural and urban job creation programme. This is more evident in many South African districts. The identification of the mining prospectus is influenced by water of resource availability. Some foreigners practise mining illegally. Their reason of extracting raw material is determined by water resource availability. Drilling machines would fail to operate if water becomes dry when drilling hard rock because water serves as a lubricant for drilling machines.

The mining industry contributes greatly to the economy of South Africa and the world. The industry utilizes a lot of the raw material which is potable for processing. Mining companies extract raw water from water resources such as rivers and lakes. The principal water users are in thermal power production, chemical and petroleum plants, ferrous and non-ferrous metallurgy, wood pulp and paper industry.

Prodam et al (2003: 58) states that the establishment of Lebalelo Water Users Association for intake was prompted by the need for the establishment of a water scheme that is going to supply the mines around the area. Hale and Lachowicz (1998: 293) argue that water is used in the industry for cooling, transportation and for washing and as a solvent. In some industrial processes, water enters the composition of the finished product.

2.3.4. The Role and Importance of Water in Development: Overview of Theoretical Argument.

Whilst there may be debates and controversies around the most effective strategies of delivering water service to the population, there appears to be little dissent over the importance of water in development. This is because water is one of the key natural resources and probably the most fundamental and indispensable one. It is fundamental to life, environment, food production, hygiene, industry, power generation (Basson, 1997: 1).

Water can help communities fight poverty. This can be possible by introducing farming projects such as fruit and vegetable gardens. Community projects can provide food for poor households and can earn them money through selling. Projects for farming in the community can benefit by providing affordable and healthy food to people affected by HIV and AIDS.

As the projects grow, employment is created for the local community. This employment will provide income for households. In the long run, community projects can become a business that sells its produce on a local, regional and even in the international markets and contribute to the economic growth of the country (Masibambane, 2006: 5). Water is the most important resource in life. No organism can survive without it. Agriculture which is the backbone of human survival cannot thrive without the availability of water (Stein 1989: 13).

Provision of clean water to the community can reduce the outbreak of water related diseases such as cholera, since people will refrain from using water drawn from streams and contaminated rivers (Masibambane, 2006: 5). The Reconstruction and Development Programme (RDP) adopted by the Government of National Unity is more than a list of the services required to improve the quality of life of the majority of South Africans. It is not just a call for South Africans to unite to build a country free of poverty and misery, but it is a programme designed to achieve integrated and principled manner.

It is because of these reasons that some of the targets that the Millennium Development Goals wanted to meet are to see to it that the number of people without sustainable access to safe drinking water and sanitation is halved by 2015 (Visser, and Mabazira, 2006).

Lack of basic service such as water supply and sanitation is a key symptom of underdevelopment. Water is one of the key resources in life. In a developed nation the water supply should be visible and be enough. In Africa, many nations are living in a dry and poor environment where they share their drinking water with wild animals due to poverty and lack of water supply.

Todaro et al (2003:15) argue about economic development that, it means the capacity of a national economy whose initial economic condition has been more or less static for a long time to generate and sustain an annual increase in its gross national product (GNP) at rates of 5% to 7% or more.

Development has the following objectives:

- To increase the availability and widen the distribution of basic life sustaining goods such as food, shelter, health and protection.
- To expand the range of economic and social choices available to people and nations by feeding them from servitude or dependence.

The provision of all of the above facilities or infrastructure can bring about upliftment of the standard of living for all the people. Water is a most critical need and is central to the provision of all of the above mentioned facilities. For effective and efficient public health service delivery there should be water in the houses as it is needed. According to Gilpin (2000: 90) development involves the application of human, physical, natural and financial resource to meet the prospective market demands and other human needs.

The quantity of water as a resource is always being appreciated in the industrial, sanitation, educational facilities and financial institutions. The same thing applies in the provision of infrastructure, hospital services and public health such as on roads construction and many other things necessary to boost life. In her address on water for growth and development summit held in Limpopo in Lephalale, Municipality; The Minister of Water and Forestry stated that “water is a key ingredient for ensuring economic growth and development and that access to water will alleviate poverty and impact on the second economy and rethinking the existing use of water in the first economy will help accelerate growth” (Kobe, 2008: 5).

The Department of Water Affairs and Forestry and the Local Municipality which are assigned the status of being water service authorities should see to it that communities are provided with sustainable water services to enhance their livelihood. Water is development and without water there will be no development at all. Water delivery to the communities is a basis for rights not a privilege. It is enshrined in the constitution of the country that every citizen should have access and affordable water services.

2.4. POLICY AND LEGISLATIVE FRAMEWORK ON WATER SERVICES

2.4.1. Overview of Legislative Provisions

According to the Constitution of the Republic of South Africa 1996 Act 108 of 1996 it is every person's right to have access to clean water. It is against this background that DWAF as a policy formulator and the implementer initiated the water supply sanitation programme in 1994. The Free Basic Water Policy was officially launched in July 2001. By March 2004, some 155 of the 170 Water Service Authorities claimed to be providing Free Basic Water. The total number of people receiving Free Basic water at that stage is estimated at 30,5 million. Through the Free Basic Water Policy, each household receives up to 6000 litres of clean water per month.

The target for 2004 was 70 percent of the population while the actual percentage of the total population served by March 2004 was 65 percent. This reflects a slight shortfall (Burger, 2004 / 5: 603).

In 1997, the Water Service Act, (1997) (Act 108 0f 1997) was passed. The aim of this Act was to ensure that the right to basic water supply and basic sanitation services is fulfilled. It also set out the rights and duties of consumers and those who are responsible for providing the service to allow the Minister of Water Affairs and Forestry to set national standards (Including Norms and Standards) to ensure sufficient and continuous water services.

In 1998, The National Water Act was passed. The Act aims at the control and the use of water resources, to protect them from being impacted on or exploited and ensures that every person has an equitable access to water, and to integrate the management of surface water

and ground water and to foster sustainable use of surface and ground water (Burger, 2004/2005).

In 2003, The Strategic Framework for Water Services was approved by cabinet. The key policy themes in the strategic Framework for water Services were to eliminate the backlog in basic provision to encourage the water services authority to provide intermediate and higher level of services.

The Strategic Framework for Water Services provides a summary of policy with respects to the water sector in South Africa. It outlines the vision goals and targets to be achieved by the Water Service Sector over the next ten years and to set up Norms and Standards for Water services. (Mvula, 2005: 271).

The National Water Act of 1998 specifies that the government is the trustee and custodian of the nation's water resource in turn must ensure that water is protected, used, developed, conserved, managed and controlled in an equitable and sustainable manner for the benefit of all the people. The National Water Act also provides a policy framework for water markets in the country as a means to address issues of water allocation and demand. The Act also gives the Minister of Department of Water affairs and Forestry power to establish a pricing strategy for charges for any water use (Blingnault & De Wit, 2004: 212).

The significance of this policy framework and Water Act is to ensure that the water service backlog that existed when the new democratically elected government came into power is being addressed and that water provision should be a universal right and not for the chosen few as it was the case in the apartheid regime.

The critical significance of this policy framework is to address the imbalances of the past with regard to provision of water resource to all citizens. The importance of this policy framework is to ensure that management and distribution is done in an efficient and effective manner for the benefit of consumers.

2.4.2. The National Water Act No. 36 of 1998

The Act is funded on the principle that National Government has overall responsibility and authority over water resource management, including the equitable allocation and beneficial use of water in the public interest.

A person can only be entitled to use water if the use is permissible under the Act. The act serves as the basis for regulating water use such as taking and storing water, activities which reduce stream flow, waste discharges and disposals.

In addition, the National Water Act No 36 of 1998) derives its principles and objectives from the new South African Law on the management of water in the country. The Act serves as the instrument related to water resource management in South Africa. It has a comprehensive provision for water use, protection, development, conservation, management and control of water throughout the country.

The National Water Act also has the responsibility of establishing the institutions of water management such as Water User Association, Catchment management agency and other bodies relevant in the Management of water internationally, and to appoint the individuals who function with water requirement.

2.4.3. Water Allocation Reform

The Water Reform (WAR) is a proactive intervention programme to address race and gender imbalances created in the water sector as a result of historical discriminatory legislation in the country. Its conceptualization and implementation fits within the ambit of integrated water resources management (IWRM); however, its focus is primarily socio-political, dealing with the re–distributive aspects of water allocation reform.

This programme (WAR) has a formally legislated political mandate and its scale is national. Although it is primarily socio-political in its focus, a wide range of specialist considerations support it. For this reasons, the programme is multidisciplinary and complex.

Success with its implementation will result in a greater socio – political and socio – economic stability for the country, and support the contention that socio – centric elements of IWRM are equally, if not more, important than techno-centric ones in particular instances (Ashwin Seetal, 2004). Water Allocation Reform in South Africa.

2.5. THE ROLE OF THE LOCAL MUNICIPALITY IN WATER PROVISION

In 2003, municipalities were given the role of Water Services Authority which means the provision of affordable and potable access to clean water was now the responsibility of the Local Municipality and no longer of the Department of Water Affairs and Forestry.

According to the Municipality System Act 32 of 2000, Municipalities are given the power to move progressively towards social and economic upliftment of local communities and ensure universal access to services that are affordable to all. Municipalities should adopt an integrated plan that will reflect an assessment of existing levels of development in the municipalities which do not have access to basic needs.

The community should be involved through proper mechanisms involving the other relevant parties in reviewing and implementation of Municipality performance (RSA, 2000:48). According to Water Services Act 108 of 1997, a local municipality is a Water Service Authority which can assign the private sector to provide services that are of standard and the need to overcome the water provision backlog which may place a burden on the staff of the local authorities.

The quality of services provided by private sector as compared to that of local authorities is of high standard and acceptable to the communities (WRC, 1995: 15). The municipality, as water service authority, must ensure the effective and sustainable delivery of water services. A municipality, as Water Service Authority, must also prepare a Water Service Development plan to ensure economical and sustainable access to water service to promote sustainable livelihoods as part of development (DWAF, 2003: 15).

In analyzing the role of the municipalities in water provision, one can deduce that Local Municipalities have not lived up to their expectations. It should be remembered that one of the research questions of this duty was to examine how Greater Tzaneen Municipality is performing. In terms of the mandate, it has been indicated that one of the Local Municipality's duty is to ensure universal access to essential services that are affordable.

According to the Constitution of South Africa, municipalities should involve local communities in the implementation and review of the Municipalities performance (RSA, 2000: 48). However, in spite of these provisions, the Greater Tzaneen Municipality is battling to bring normal water supplies in Lenyenye Township.

The taking over of all water supplies from DWAF was thought to be a good move to solve the suffering of the community. Some private contractors were seen involved in the reticulation of the old infrastructure representing the municipality and changing of the old systems. All these proved to be worthless as the community is still lamenting about poor water supply services.

2.6. The Role of the Department Of Water and Forestry in the Provision of Water

The Department of Water Affairs and Forestry's core function is to ensure that all South Africans have equitable access to water and sanitation and that, the country's water resources and forests are managed in a sustainable manner (Burger, 2004:597). The role of DWAF has been altered as the Water Service Authority is now responsible for providing water services. DWAF's new role is to act as South Africa's water resources custodian. DWAF acts as water services policy formulator and regulator rather than providing operational services. DWAF will ensure that it provides an ongoing advisory service to the water sector (DWAF, 2006: 3)

As policy formulator, DWAF makes sure that there is a promotion of good practice, development and revision of national policies, oversight of all legislation impacting on the water sector co-ordination with other national departments on policy, legislation and other sector issues, national communications and the development of national strategies to

achieve water sector goals. DWAF also has the responsibility to develop policy with regard to international water services issues (DWAF, 2003: 22).

It is DWAF's responsibility to draw up a strategic framework that would regulate the water services sector and to ensure that water service Acts are implemented and that there is total compliance, and to ensure that National Water Act is critical in forming past laws relating to water resource which were discriminatory and did not recognize water as a basic human right (MVULA TRUST, 2003: 2).

As the custodian of water resource, DWAF has not done enough in terms of achieving its mandate. DWAF is also expected to provide its financial skills and support to the water service provider such as the Greater Tzaneen Municipality with reference to Local Tzaneen Municipality lack of skills with regard to water service has been a major constraint.

Financial support to municipalities by DWAF will without doubt enable Municipalities to function properly. If these resources are properly used, water supply service will improve because the common cause to these problems could be lack of relevant management skills, enough money directed towards changing the old way of water supply services.

2.7. SITUATIONAL ANALYSIS OF WATER SUPPLY SERVICES IN SOUTH AFRICA

Water supply and sanitation in South Africa is characterized by both achievements and challenges. The allocation of water in this country (SA) is part of the government's overall post – apartheid programme of reform and redress of past discriminatory legislation that started with the advent of democracy in 1994. Within the water sector, reform commenced formally in1995 with the Water Law Review process (DWAF 1995, 1997a).

This legal review process culminated in the "White Paper a National Water Policy for South Africa" (DWAF 1997) and two sets of water legislation, namely, the Water Services Act (108 of 1997 and the National Water Act (36 0f 1998). All elements of integrated water resources management (IWRM) are factored into the WAR Water Allocation Reform programme, however particular emphasis is given to the socio-political dimension of IWRM to help

remove the perception of IWRM as a tech – centric process with the “people element” being incidental.

In South Africa, the engineering, technical and scientific disciplines have traditionally featured prominently in integrated water resource management creating and reinforcing perceptions of this exclusivity. An envisaged outcome from the (WAR) programme is the “socialization” of IWRM, particularly by bringing together land and water- use management and actively engaging people in the management of both resources.

Although Water Allocation Reform is primarily socio-political in its focus, it is supported and informed by a range of specific considerations, including, *inter alia,* legal, technical, scientific, institutional, environment, financial and economic issues.

2.7.1. Legislative Provisions and Considerations

The previous water law, which was based on the Roman and Dutch riparian rights principle, gave access to the resource to those who owned land. The minority white population (3 percent) owned approximately 87 percent of the land and a land reform program was established to address this anomaly. (Ashwim Seetal & Gavin 2003).

Although the riparian rights principle and the concepts of public and private water have been abolished, their legacy still endures and all lawful water use in terms of these and other relevant statutes are recognized by the current National Water Act (NWA) and are accommodated within the WAR programme.

Under the previous legislation, water use was also allowed on the basis of the availability of water and priority of application for its use that is on the first – come first served basis. Most of this was largely unregulated, also because of the principle of riparian rights and the concepts of “public and private” water and normal” and “surplus” Flows. Regulation of water use was greatest in the Government Water Control area that is areas where previous government had developed the resource by building dams, irrigation supply canals and or providing other infrastructure.

The approach proposed by the NWA is framework – based and much more strategic, deliberate and dictated by socio-political reforms and socio – economic development needs on a programmatic basis for long – term sustainability.

The approach is more systematic, but resource - intensive and demanding in the inception period. The Act also makes specific prescriptions to ensure that there is a balanced between "individual rights" and the "public interests" in allowing access to water resources, or to the benefits from the use water resources.

Proactive implementation of the reform aspects of the NWA has been slow to date. As South Africa enters its second decade of democracy, this continued slow progress with implementation will further exacerbate the current situation of increasing unlawful and or unsustainable use of water resources by both the historically advantaged sectors of South African society.

2.7.2. The Context of Water Use

According to the National Water Act, "water use "includes the consumptive use of water to carry waste, storage of water, impeding or diverting the flow in watercourse, and stream flow reduction activities (such as commercial forestry). The phrase "water use allocation" refers to water use as defined in section 21 of the National Water Act.

Water use many refer to use of either the surface or ground water resource. All of these uses of water form part of the process of water use allocation and, therefore, part of the programme. Much of the thinking with respect to allocation planning and compulsory licensing (a specific intervention in which water allocation plans are developed and licenses for water use issued on a catchment wide-scale) has focused on the consumptive use of water, and primarily on water for irrigation. However, other uses of the water resource are included as well. In particular, these include the challenges concerning reallocation of licenses for water use to carry waste.

The WAR programme prescribes the most beneficial use of water, which unless demonstrated, could result in the reallocation of water between inefficient and unproductive

users and sectors to more productive ones. WAR, and the methodologies developed by the programme, attempt to give effect to the goal of beneficial use in the interest and preaches the slogans “more crop / Rands / job per drop” of water used.
The current emphasis on consumptive use of water by irrigated agriculture is that use by this sector accounts for approximately 62 percent of the water use in South Africa. Although irrigated agriculture makes a relatively small contribution to South Africa’s gross domestic product, it provides socio-economic stability to rural society (DWAF, 2004).

Much of the socio-economic stability provided by agriculture in rural areas comes from providing employment to rural communities. National employment in agriculture is 11 percent, and this only 10 – 15 percent is in irrigated agriculture. However, agriculture provides much of the country’s food security.

Currently, irrigation water is still in the hands of few farmers. Clearly, this pattern must shift. Many existing irrigation water users feel disenfranchised by the new dispensation and may not willingly cooperate with the reallocation process, which may slow down reallocation.

Willing cooperation from this sector is also important to ensure adequate cost recovery for water use, and will be critical to the sustainability of future Catchment Management Agencies. The manner in which the program will engage these existing water users, and the way it shifts water use patterns, is therefore critical to successful water use reform and for maintaining economic growth and investor confidence.

Current water patterns in South Africa show, not only a racial bias, but also a gender bias. Even though in many rural households women are the primary decision – makers and have the responsibility for raising crops to feed the family, land ownership is often in the hands of the male members of the household. Gender inequality may therefore be further entrenched by linking water use to property rights over land.

The water reform process must recognize and correct these gender inequalities in water use. Despite South Africa’s middle income status, half of its citizens lack adequate nutrition, water, sanitation, proper shelter and healthcare. In order to address this “dismal shame of poverty” (Mbeki, 1996), the new constitution requires that local authorities give priority to basic needs of and promote the social and economic development of the community.

Water availability in South Africa varies greatly in space and time. While the plateau is arid, with rainfall only during the summer and as low as 100mm, the Southeast receives rainfall throughout the year with an average of up to 1,000mm. Total annual surface runoff is estimated at 43 to 48 km3, depending on the source. However, much of the runoff is lost through flood spillage, so that the available surface water resources are estimated at 14km3 / year only.

Although groundwater is limited due to geologic conditions, it is extensively utilized in the rural and more arid areas. Available groundwater is estimated at 1km3 / year. The main rivers of South Africa are the Orange River draining to the Atlantic Ocean, the Limpopo River, the Tugela River, the Olifants River (Mpumalanga), and the Breede River. The four latter rivers all drain to the Indian Ocean.

Total annual water withdrawal was estimated at 12.km3 in 2000, of which about 17 percent was for municipal water use. In the Northern parts of the country, in the well – watered Southern region of the country significant undeveloped and little use resource exist. The Gauteng area which is water scarce, receives water from various dams in the area, such as the Vaal Dam, and imports water from the Orange River system through the Lesotho Highlands Water Project, in particular from the Katse Dam. Cape Town receives its drinking water from an extensive of rivers and dams, including the Berg River Dam.

However, in 2004, the province under which the research study was conducted recorded 871783 of household that received water from the municipality and 539640 out of 871783 received free basic water from the municipalities. There are records which showed the increase of households by 6,4% with access to water (Statistics South. Africa. 2007).

According to statistic South Africa, non-functional census of municipalities issued in 2000, Limpopo Province reported 1069365 as consumers units receiving basic services from Municipalities and service providers with an increase of 515005 of consumer units that receive free basic water was also recorded. An increase of 197582 was recorded in our province as a number of units receiving basic water services in 2006. (Statistics South Africa, 2007).

Statistics South Africa (2009) indicates that in South Africa, Limpopo Province recorded an increase of 1124811 consumer units that receive basic water from the municipalities and with an average increase reported as 515005. Averages increase of households that receive free basic water from Municipalities and other service providers in South Africa to be 10345797 households. (Statistics South Africa, 2007). There are records which showed the increase of households by 6,4 percent with access to water (Statistics S. Africa 2007) According to statistics South Africa non – functional census of Municipality issued in 2007, Limpopo Province reported 1069365 as consumer units receiving basic services from Municipalities.

Service providers with an increase of 515005 of consumer units that receive free basic water were also recorded. When analyzing the water supplies in one of the provinces under the study area, according to Statistic South Africa 2007, one deduces that there has been a remarkable increase from 2004 to 2007. The question is, can this increase be quantified?. The fact that there are still people who depend on water from wells is a course for concern. The fact that people use donkey carts to carry water means that the proximity of the water taps or sources of water is far from their dwelling.

Statistics South Africa (2004) indicates that only 15,4% of the households received piped water on a community stand, less than 200m from the yard, while 9,9 percent receive piped water inside the dwelling. (Lehlola, 2004; 75 – 76). The statistic given, displayed the imbalances in the delivery of water and supply services to the households. Most household that are negatively affected are in the rural areas especially in Limpopo.

The scarcity of water in the province has been evident in places such as Thabazimbi Municipality where, according to the report, the community spent about a month without water supply. The community is forced to spend R1,50 to get 25 litres of water and many people are not working. Those who cannot afford to pay for water, resort to water from wells, fountains or rivers.

The ageing infrastructure and the mining excavations in the area have been blamed as the cause for the scarcity of water in the area. The likelihood is that Thabazimbi community might spend a long time without improvement on water supply services. Statistics South Africa (2008) states that, about 25656 of households receive water from the boreholes, 1 840

households from a spring 4 697 households receive their rivers, while 12 426 receive it from vendors and 12 094 get water from other source (Stats, S.A. 2004: 76).

2.7.3 The Provision of Water Supply Services and Backlog

There is a vast backlog to overcome in the provision of water and sanitation service within the urban and rural areas of South Africa. According to Palmer (2004) in the distribution of numbers concerning the backlogs in rural and urban areas, there proved to be indication of population with water supply shortages. In the report conducted for Water Research Commission of 1995 there were 6,1 percent of people without adequate water in the rural areas of South Africa. Again, a population without adequate water was found also in urban areas and this would mean that 10, 8% of the country's population had no clean piped water supply and the problem is still continuing.

According to Bishop (2001: 60) worldwide improvement in water supply, the use of village wells and hand pump as well as plastic piping and storage container means that water is collected, stored and transported. In developing countries, an individual may consume up to 200 litres of water per day and statistics show that in countries such as Australia they consume about 160 litres per day per person as reported by Bishop (2001: 6). In Canada it is about 200 litres, and in Netherlands is around 161 litres and in Japan, 126 litres, in Germany 117 litres of water used by an individual per day.

South Africa is one of the few countries in the world that enshrines the basic right to sufficient water in its Constitution, stating that" Everyone has the right to have access to sufficient food and water" However, much remains to be done to fulfil the right. After the end of the Old, previous Government, South Africa's newly elected Government inherited huge services backlogs with respect to access to water supply and sanitation.

According to (WHO / UNICEFF, 1990) about 15 million people were without safe water supply and over 20 million without adequate sanitation services in 1990. Since then, an additional population of about ten million people gained access to an improved water resource. According to WHO / UNICEF joint Monitoring Program of water supply and sanitation, the share of the population with access to an improved source of water supply has

increased from 83% from 1990 to 91% in 2008, implying that almost 15 million people gained access during that period.

Water tends to fall literally in the hands of women. Women spend one third of their lives fetching water from streams and wells. They are responsible for using it to cook meals, wash laundry and bathe children. Men's dependence on water is rooted in agriculture and livestock.

In his State of the Union address to Parliament in May 2004, former South African President Thabo Mbeki promised "all households will have running water within five years" Given previous trends, achieving this objectives is a major challenge. With respect to sanitation the picture is more sobering.

According to official statistics South African figures, an estimated 18 million South Africans did not have access to basic sanitation in 2002 and may be using the bucket system, pit toilets or the field. When sanitation systems are inadequate the health impacts can be extremely serious. This is evidenced in the estimated 1.5 million cases of diarrhoea in children under five and the 2001 outbreak of cholera.

According to estimates by the WHO / UNICEF Global joint monitoring programme for water and sanitation based on survey and census data, the share of South Africans with access to adequate sanitation actually decreased from 69 percent in 1990 to 65 percent 2004. Given these trends, it is difficult to see how the national target of universal access to a functioning sanitation facility by 2015 can be achieved. Furthermore, substantial challenges remain in addressing historical inequalities about access to both water supply and sanitation, and in sustaining service provision over the long term.

2.8. WATER SUPPLY AND SERVICE QUALITY

Service quality is highly variable and its data is sketchy. Monitoring of service quality by the government's Department of Water Affairs is only starting, with the "blue drop green" Water Quality Regulation Strategy. Thus 63 percent of municipalities could not say if they met

drinking water quality standards or not. Water supply to 37percent of households was interrupted for at least one day in 2003 as per WHO / UNICEF report in 2004.

A survey by the Council for Scientific and Industrial Research (CSIR) showed that wastewater treatment plants in South Africa, especially in Gauteng area, are working well and meet effluent standards. However, many other wastewater treatment plants do not meet effluent standards and some do not even measure effluent quality.

According to Blue water Bio, 2006 an international firm specializing in wastewater treatment, out of 1, 600 wastewater treatment plants in South Africa at least 60 percent are not regulatory compliance requirements. The public water and sanitation sector in South Africa is organized in three tiers, which are, The national government, represented by the Department of Water Affairs, as policy setter. The Water Boards, which provide primarily bulk water, but also some retail services and operate some wastewater treatment plants, in addition to playing a role in water resources management, and the municipalities, which provide most retail services and also own some of the bulk supply infrastructure.

The banks, as professional associations in the Water Research and civil society, are also important stakeholders in the water sector. The Department of Water Affairs (DWAF) in the Ministry of Water Affairs is primarily responsible for the formulation and implementation of policy governing water. In the water sector, it is in charge of policies for water resource management as well as water supply and sanitation. Responsibility for service provision is shared among water boards and municipalities.

2.8.1. Water Boards

Government – over Water Boards play a key role in the South African water sector. They operate dams, bulk water supply, some retail infrastructure and some wastewater systems. Some provide technical assistance to municipalities.

Through their role in the operation of dams they also play an important role in water resources management. The Water Boards report to the Department of Water Affairs. There are fifteen Water Boards in South Africa, together indirectly serving more than 24 million

people in 90 municipalities in 2005, or about half the population of South Africa. According to the Constitution of South Africa 1996, the Municipal Structures Act, and the Water Services of 1997, pp 25, responsibility for the provision of water and sanitation services lies with the municipalities. The National Government can also assign responsibility for service provision to local municipalities, of which there are 231 of them.

Overall, there are 169 water service authorities in South Africa, including water boards, district municipalities, local municipalities and the municipalities and the municipal companies. The responsibility for rural water supply and sanitation has been transferred from the national government, represented by DWAF, to municipalities. Since 1994 some municipalities have involved the private sector in service provision in various forms, including contracts for specific services such as wastewater treatment, short – term management contracts and long term concessions.

South Africa has introduced a policy of free basic services, including water, electricity and solid waste collection. As part of the policy, every household receive the first 6 cubic metres per month for free. The policy was not to be implemented immediately, but gradually and within the means of each municipality. Municipalities decide if free basic water is made available only to the poor, and how the poor will be defined and identified. Most municipalities provide free basic water to the great majority of their residents. The cost of the policy has been estimated at 1.5bn Rand or 0.15 percent of GDP.

The subsidy is financed either through subsidies from the national government from the equitable share automatic transfers, through cross – subsidies from other users or local taxes. Out of 169 service providers, 29 (including Cape Town) provide free basic water to all their residents, 136 to some and 4 very small municipalities to none. Those service providers that provide free basic water to some actually provide it to the great majority of their residents. For example, the city of eThekwini provides free basic water to 99 percent of households in the entire municipalities in Gauteng to 90 percent. In 2010 the program reached 86 percent of all households and 87 percent of poor households.

According to Nkululeko Gumede, a former official at the Department of Water Affairs, about 75 percent of all free water, benefits people who can pay for it. The policy is more successful in wealthier municipalities than in low – income rural areas. This is one of the reasons why the government is reviewing its implementation strategy for free basic water, possibly through registers of poor users. Dependence on the state has meant that with the cost of water supply being so high and recovery being so low negative in many rural areas, the financial way of sustainability of water scheme has run aground. And people have no interests to sustain water or use it carefully, and it becomes a questionable issue.

Davis Band Day (1997) mentions that there are serious problems with government drinking water supply scheme. Despite the government's effort to bring sustainable standards of water supplies, the number of problems does not subside as per observation. Some scholars justify that inadequate water supply and sanitation facilities are the major cause for the high prevalence of parasitic infections, generally low health and nutrition status among the rural population.

Looming water crisis could unravel world economy without radical action. Investors say that water shortages will cause greater ruin than oil. Dwindling supplies are a lesser risk to business than running out. It is evident that from water statistics and the information given, little water is available for utilization and for consumption throughout the world. This is justified by the notion that water scarcity is a world phenomenon and a challenge (Hugo and Viljoen, 1997; 1190).

DWAF (2003: 01) confirmed that a water supply backlog has been created during the past government, and that it would not be easily addressed overnight. It also stated that at the dawn of democracy in South Africa, there were still about 12 million people who were without adequate water and sanitation. This also led to strikes by the Lydenburg community of Balfour in demand for better services, including water for living. Another noticeable shortage regarding water services in the country is the presence of too many dry rivers which are supposed to be filled with water that is needed by the people, but the rivers run dry.

Many of these rivers are seasonal and dry and they fail to flow in all seasons (Basson, 1997: 31). The water scarcity in South Africa, as observed by Du Plessies (1986), and in other regions of the world has been identified as the main constraint that hampers social development. This is the reasons after this big backlog in the supply of water.

The proportion of households getting free basic services is still generally low, but in Western Cape, as reported by "SOWETAN" January 24 in 2011, it is improving as compared to the national average. This is ratified by the South African Institute of Race Relations.

The latest annual South African survey showed that in 2009, about 82 percent of the Western Cape households received free basic water, 69 percent free sanitation and 52 percent solid water services. The corresponding national figures were 58 percent, 33 percent and 23 percent. The Free State came out on top in the provision of free basic electricity to 63 percent of households against a national average of Western Cape households received free basic electricity from their municipalities, the second highest number of all provinces. Kwazulu – Natal households fared worst in terms of free basic services and solid waste at 15 percent respectively.

Mpumalanga registered the lowest percentage in the provision of free water at 41 percent and sanitation to 13 percent. The institute said free basic services were funded using local government revenue and internal cross subsidies from service tariffs. In addition, the roll-out of free basic services depended on the infrastructure available and on spending by municipalities.

This information indicates that Western Cape Municipalities in South Africa have sound revenue – collection mechanism in place and the willingness or capacity to spend money on the provision of essential of indigent households.

2.8.2. Situational Analysis of Water Supply Service in Limpopo Province

Statistics South Africa (2004) indicates that in 2003, Limpopo Province had 667649 of households that were receiving basic water service from Municipalities. It is also stated that

out of 667649 households, about 370791 received free basic water in Limpopo Province in 2003. It also indicated that 55, 5 percent of the Limpopo households were receiving water services from the municipalities.

However, in 2004, Limpopo Province recorded 871783 households that received water from the Municipality and 539640 out of 871783 received free basic water from Municipalities. There are records which showed the increase of households by 6.4 percent with access to water (Statistics S.A. 2004).

According to statistics South Africa non – functional census of municipality issued in 2007, Limpopo Province reported 1069365 as consumer units receiving basic service from municipalities and service providers with an increase of 515 005 of consumer units that receive free Basic Water also recorded. An increase of 197582 was recorded in Limpopo Province as a number of units receiving basic water services in 2006 (Statistic South Africa: 2007).

Statistics South Africa (2009) indicates that Limpopo Province had recorded an increase of 1124911 consumer units that received basic water from the municipalities and with average increase of 575 005. An average increase of households that received free Basic Water from municipalities and other service providers in South Africa is reported to be 103 45797 households (Statistics South Africa 2007).

When analyzing the water supplies in Limpopo Province, according to Statistic South Africa, one can deduce that there has a remarkable increase from 2004 to 2007. The question is can this increase be quantified? The fact that there are still people, who depend on water wells, is a cause for concern. The fact that people use donkey carts to carry water, means that the proximity of water taps or source of water are far from their dwelling.

Statistics South Africa (2004) indicates that only 15,4 percent of households received Piped Water on a community stand less than 200m from the yard, while 9.9 percent of households receive piped water inside the dwelling (Lehlola; 2004 – 75 – 76).

The statistics given, display imbalances in the delivery of water and supply services to households in Limpopo Province. Most households that are negatively affected are in the rural areas of Limpopo Province. The scarcity of Water in Limpopo Province has been evident at places such as Thabazimbi Municipality where the community spend about a month without water. The community is forced to spend R150 to get 25 liters of water and many people are not working, and those who cannot afford to pay for water, resort to water from wells, fountains and rivers.

The ageing infrastructure and the mining excavations in the area are said to be the causes for the scarcity of water in the area. The likelihood is that, Thabazimbi community might spend a long time without improvement on the issue of water supply services. In the past years, they spent one festive season in 2008 without drinking water (Ngwepe A, 2008: 7).

Statistics South Africa (2008) states that, about 25 656 of households receive water from the bore-holes, 1840 households receive water from the spring, and 4 697 households receive water from dams pool and stagnant water. And 8 373 households get their water from rivers and streams, 12 426 from Vendors and 12 094 from other sources (Stats, S.A. 204: 76). The District Local Government under-study in Mopani has not achieved its mandate. If the majority is still receiving water from rivers, streams and springs, this implies that more households are at a risk of using contaminated water and as such, people will suffer from water related diseases such as cholera and others.

2.8.3. Water Quality in the Mopani District

Concern exists about pollution of groundwater with acidic mine located in the coal mining areas in the upper Olifants sub area and discharge of mine effluent in Phalaborwa. Most of the water used in the upper Olifants sub – area is used as cooling water for thermal power stations, which is a highly consumption use of water and requires a relatively high quality of water (FAO, 2004). A substantial quantity is also used in Urban area, more than half of which, again, becomes available as return flows for downstream use, however the quality will have been compromised.

Seepage from upper Olifants sub catchment and the Witbank coal field dumps and mine workings results in the discharge of large qualities of polluted water. This water is typically acidic and has high concentrations of metals and sulphates (DWAF, 1993). Pyrite is found in coals, coal tailings and carbonaceous mudstones and shale associated with the coal seams. Pyrite breaks down on contact with water and air, resulting in acid rock drainage. Acid rock drainage may be neutralized by carbonates in the local rock units, but the results in elevated levels of calcium and magnesium sulphate in the water systems (Dallas and day, 1993).

Coal mining adversely affects groundwater quality. Seepage water from coal waste dumps tends to be highly acidic and can percolate through the unsaturated zone into the aquifer, depending on local geological conditions. During a study of coal water dumps in Illinois (Schubert and Prodan, 1981) groundwater samples in the vicinity of the dumps showed elevated levels of acidity, sulphate and dissolved metals, notably iron, aluminium, manganese, nickel, zinc and cal.

Coal mining also releases large amounts of coal dust into the atmosphere. Although this is primarily air pollution problem the material often falls into water bodies. This proves that water even though is somewhere being adequately supplied; it is not relevant for consumption in Limpopo Province district of Mopani. These coal dust and fly as falling on water bodies of the transition and heavy metals, and metals such as calcium, copper, cobalt and zinc.

Most members of the population in the Province reside in rural areas, which have a paucity of reliable surface water resources with few permanent river courses with sufficient flows. As a result, most areas of the Province depend on groundwater for domestic consumption. Water for domestic purpose also includes water used for bathing and laundry, which requires low carbonate levels. Groundwater is usually used to augment the available water for irrigation, livestock and domestic consumption.

The assessment of water quality, as done here, is of high importance because human health requires water that is safe to drink. Safe drinking water as defined the WHO (2004), is water which does not represent any significant risk to health over a lifetime of consumption, including different sensitivities between life stages.

Infants and the elderly are generally at a great risk. Drinking water must be low in metal, fluorides, nitrates and nitrites (Ncube and Schutte, 2005, WHO, 2004). It must be palatable in terms of taste, odour and colour (DWAF, 2006).

CHAPTER 3

3. RESEARCH METHODOLOGY

3.1. INTRODUCTION

This section sheds some light about the methods which the researcher will use during the research study. The following aspects of methodology will be discussed and clarified for the study: research design, area of study, population of the study, sample size and sampling methods, data collection and analysis methods.

3.2. RESEARCH DESIGN

Research design provides valid and accurate answers to research questions. Mc Given (2007: 78) argues that the" research design" is about the topic of the research and its framework. It is a structure of the investigation which used to obtain evidence to answer the research questions.

The researcher may use either qualitative or quantitative method, depending on the research results that are expected. The purpose of research design is to structure the research so that it delivers the evidence necessary to solve the research problem as accurately and unequivocally as possible.

Bless et al (2000: 63) argue that research design relates to testing a hypothesis. It is a specification of the most adequate operations to be performed. In this study, a quantitative approach was adopted. The rationale for selecting this method was based on the fact that the research seeks to obtain a detailed understanding of the views and perceptions of the water users and water providers as they are the main stakeholders involved in water supply problems and their numbers (Moutoni 1996: 107).

In this study the research design is supported by Bless et al (2000: 37) when he indicates that, in cases where very little is known about research, one should speaks of exploratory

research. There are areas where the researcher should be interested in describing something. Then, that would be a descriptive research. Where the research question requires an understanding of relationship between variables; the research question demands that the researcher explains the relationship between variables and demonstrates that change in one variable causes change in other variables, this is an exploratory research.

3.3. AREA OF STUDY

The area of the research study covered the entire household of Lenyenye township in Greater Tzaneen. This area is part of Mopani District in Limpopo Province. The area is one of those places founded during the sixties by the then government

3.4. POPULATION OF THE STUDY

2000 households were considered to be population of the study. Because of the fact that they all had common characteristics as far as water supply constraints are concerned. The researcher obtained the population register from Greater Tzaneen Local Municipality. Devos et al (2002: 198) define population as total set from which the individual or units of the study are chosen or the sets of elements that the research focuses on and to which they obtained results should be generalized.

Again, population can be defined as a set of entities of which all the measurements of interests to the practitioner or researcher are presented. The entities can be people, such as all the clients comprising a particular work. These are the individuals in the universe possessing unique characteristics.

The way in which a population is defined depends on the issue the research aims to address. According to McGiven (1996: 24), population refers to universe of inquiry or, as one puts it in another way, to the organization, events or items that are relevant to the research problem.

The population of the study comprises of two groups, they are consumer and the water providers. The consumers are household members and the number sampled from households is sixty household found to be residing at three different levels.

The other category is the water providers who are represented by six institutions. From these two categories, the representative samples were drawn for research study.

3.5. THE SAMPLE SIZE AND SAMPLING METHODS

In this study, the sample is drawn from two groups. One part will be the consumers or households and the other is from the water providers or water suppliers. The sample of about five percent will be drawn from the total population of 2000. The population samples will be identified from the three different levels or places of residence. Some of the group members are residing at high terrain, where water supply is limited, lasting for less than two hours per day because of low pressure.

The other group is in the middle terrain, where water supply is more than two to three hours in the morning and in the evening, which is more than in the high lying area. The sample is based on the three levels which have vast difference as far as water supply is concerned. The three level areas are the high, middle and low lying areas.

The other part of the population is the representatives from the water suppliers. The sample is formed by representatives from each water institution. The method that was used to select the samples for the two groups, the households and water supply institutions, is the random sampling method. The method was chosen because it ensures that every element in the sampling frame has an equal opportunity of being included in the sample.

The researcher opted for a stratified random sampling as the two categories are seen to be separate groups with different position of operation and service and are consumers, while others are the water supplies. These are separate groups that need to be identified separately. According to De Vos (2002: 205) stratified random sampling is suitable for heterogeneous populations because the inclusion of small sub group percentages can be ensured.

3.6. DATA COLLECTION METHODS AND PROCEDURE

In this study, only two methods were employed to collect data. There are many possible ways of gathering information from the participants if such information cannot come neither from interview nor from a survey questionnaire. Data collection was done by using the questionnaire and the interview methods.

An interview involves direct personal contact with the participant who is asked to answer questions. The consumer was the target for the focus of data collection. A survey questionnaire was used to obtain the data pertaining to water supply services from the representatives of water supply institutions.

3.7. DATA ANALYSIS METHODS

The process of data analysis can take different forms but it depends upon the nature of the research and the design and the nature of the data itself. According to De Vos et al (2002: 339) data analysis is a process of bringing order, structure and meaning to the collected data.

Qualitative and quantitative data were used as the methods. According to Bless et al, (2004: 137), qualitative data is analyzed with techniques especially designed for this type of data. Very often, qualitative methods of data play complementary roles in the data analysis process in may research studies.

3.8. ETHICAL CONSIDERATIONS

In the process of conducting this study, the researcher attempted to safeguard the respondents. Their emotions and physical feelings were never harmed, though the researcher informed the respondents about any possibility of any harm which is unintentional through the use of words, but that it would be avoided at all during the study. Approval was sought by the researcher from relevant institutions of water supply services such as the Local Municipality and the water User Authority to grant permission to interview water providing officials and the household members.

The respondents were given reasons for conducting the research and they were never deceived but relevant things were disclosed unto them. The privacy of the respondents was never violated and the research was conducted with anonymity regulation and confidentiality.

3.9. LIMITATIONS OF THE STUDY

The study covers only Lenyenye township and it was not extended to surrounding villages. The findings from the research conducted in the township serve to represent and reflect generalization of a larger population in the area. Literature reviewed was consolidated with the research findings from the study.

CHAPTER 4

4. DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Introduction

The purpose of this chapter is to present, analyze and interpret data collected from respondents who are consumers and water providers. Since this research study is both quantitative and qualitative in nature, some of the findings would be presented through descriptive, tables and statistics and it will be easier for the reader to interpret and indicate data relationships which could be difficult to interpret in words.

In the study, the researcher has tried to seek answers to water supply problems through the analysis of the raw information collected from water providers and consumers in the households. Data presented is into two groups, one consists of consumer data while the other one is the water providers. The chapter presents the main findings of the study based on the key research questions presented in the previous chapters. The quality and quantity of data determines the relevance of research results. The key questions as reflected in the interview guide and questionnaire covered the following broad areas.

The researcher consulted with various stakeholders and sources of information which include interviews with respondents, conducting an interview through a questionnaire in the Water Providers department and Institutions.

- Personal profile of respondents
- Situational analysis and the status of Water Supply Services in the Township of Lenyenye.
- Perceptions of the consumers on the quality and quantity of water supply services.
- Consultative processes and mechanisms put in place by the municipality and the community to bring effective to Water Supply Services.
- Different uses of water as a resource.
- Water Supply Constraints and its Impact to the consumer as respondents.

- The community's perception on the effectiveness of the municipality in dealing with water supply challenges.
- The expectations of the community with regard to solutions to the problems of water supply services.
- Satisfaction with water supply services in Lenyenye Township.
- Different uses of water as a resource.
- Water supply constraints and its impact on consumer respondents.
- The community's perceptions on the effectiveness of the municipality in dealing with water supply challenges.
- The community's expectations with regard to solutions to the problems of water supply services.
- Satisfaction or dissatisfaction with water supply services in Lenyenye township?
- Poor Local Governance.
- Capacity challenges in the Local Municipality.
- Vandalism and illegal water connections
- Inadequate water supply infrastructure

4.2 Personal Profiles of Respondents

The researcher required personal information of the respondents. The information required included the respondent's Age, Level of education, Income as a point of departure in analyzing data and the extent of satisfaction.

4.2.1

4.1. TABLE 1. AGE OF RESPONDEDNTS

AGE	RESPONDENTS	PERCENTAGE (%)
18 – 30	7	35
31 – 40	11	55
41 – 50	-	-
51 – 60	-	-
Above 60 years	2	10
Total	20	100

The table shows that 55% of the respondents fall between 31 – 40 years, and 35% being between 18 – 30 and only 10% being pensioners.

4.2.2. Respondent's Educational Qualifications

4.2. Table 2 Educational Qualifications

QUALIFICATIONS	RESPONDENTS	PERCENTAGE (%)
No formal Education	02	10
Primary Education	12	60
Matric Education	04	20
Tertiary Education	02	10
Work Training	-	-
Total	20	100

The educational levels for the respondents in the above table show that those who have matric are at 20%. As it is in the township, many respondents had opportunities to have formal education. Those who had work - related education were only 02 at 10% from the sample.

4.2.3. Source of Income for the Respondents

4.3. Table 3. Source of Income

SOURCE OF INCOME	RESPONDENTS	PERCENTAGES (%)
No Income	04	20
Social Grant	06	30
Govt. Employees	07	35
Self Employed	03	15
Total	20	100

The majority of the respondents in the sample are government employees at 30% who survive from social grant which is provided by government. Poverty levels are portrayed by 20% of respondents who do not have income at all. Sources of income as way or benchmark where a better life is being measured and from the sample, self employed respondents are just few as it stands at 15% as the table indicates.

4.2.4. EXTENT OF SATISFACTION

4.2. Table 4 Extent of Satisfaction

TOTAL RESPONDENTS	THOSE WHO RESPONDEND	RESPONSES	PERCENTAGE (%)
12	6	Not satisfied with water services	85,7
8	1	Satisfied with water services	14,3
Total	7	100	100

The table shows respondents from two categories of samples. From one sample, six responded not to be satisfied with water services and only one respondent was satisfied with water services. The percentage shows that many household members were not satisfied.

4.3. Situational Analysis and Status of Water Supply Service in Lenyenye

Lenyenye Township is made up of 2000 households, where 31.78% of the people receive RDP Standard Water Services, and the capacity of the bulk purification plant is 2,3ml - 4,6 ml (Greater Tzaneen Municipality IDP final for 2007 – 2011). The township receives water, from Nelson Ramodike dam situated in the Ba-Thabine mountains. The water, which is to be pumped into the township's reservoir, is also shared by the surrounding villages before it flows into the storage dam, and this fails the dam to reach its maximum levels.

The villagers temper with the main pipeline through illegal connections. The current water loss in the Greater Tzaneen Municipality area is 25% but the target is that, if more funds could be directed or become available, that will be reduced to 15 percent. The total percentage of households with access to basic water services is 85% and sanitation only is 13 percent. There are about 11 300 metered water connections and their target in the 2007 – 2011 IDP is to increase to 15 800 by means of bulk water supply and reticulation. There are about 60 600 stand pipes which access to water within 200m to households.

Before Greater Tzaneen Municipality can implement free basic water policy, which has been approved nationally, it has to be in line with the water service authority's policy. The basic principle around the Water Service Authority's policy, is to provide free basic water to the poorest of the poor whose income level is beneath R1,10 per month.

The challenge in Lenyenye township is that the reservoir is too small to cope with the demand for water by the households and other activities that need water as a service agent. All the respondents interviewed described the water supply situation in Lenyenye Township as a crisis situation. They describe it as a situation which is gradually crumbling since 1994, and if not curbed immediately, water supply service will collapse completely. A solution needs to be found to resolve this problem.

The respondents affirmed blame on the Municipality Local council which does not regard water supply shortages as a problem in the township. Sometimes water takes two to three days without flowing in the taps. When there is no water, the only reason consumers get from Water Providers, is pipe burst. Water becomes scarce even though there are no burst pipes.

4.4 Perceptions of the Consumers on Quality and Quantity of Water Supply and Services

The researcher interviewed the household members what is their take on water related supplies which cause poor water situation in the Township. From the responses, a number of issues, as contributors of poor water supply in the area, were mentioned.

4.4.1 Lack of Community Participation and Adequate Consultation In Water Supply Services

The respondents during the interviews indicated that they were not involved in the water formed structure to resolve issues and plan for water related matter. The non – participation was mentioned by many respondents who even mentioned in the interviews that, by being sidelined and not consulted, water supply services will decline the more.

Community meetings are been held, and in the meetings, water problems are debated by the ward councillor, but promises to resolve them are not fulfilled. The other main contributing factor is that community members do not attend community meetings when they are called to such meetings, one respondent explained.

Although invitations are sent out to community household members for discussions on water problems such invitations do not reach the relevant households. The concern from the households was that the municipality does not involve them in its planning, hence poor water supply.

Table 5 Perceptions of Consumers on Water Supply Services

SERVICE DELIVERY	% OF RESPONDENTS
Bad or Poor	45
Better than in the past	39
Bad – No Improvement	16
Total Responses	100

According to table 5, the respondents indicated that there is still poor service delivery as reflected by 45 percent and 16 percent respectively, of responses on service delivery perception by consumers. About 39 percent of respondents mentioned that the service delivery is better than in the past as it is determined by the availability of water in the low lying areas of the township.

4.4.2 Different Uses of Water

Twort (1986) identified several categories of water uses, which are namely, water for consumption, domestic water, and water used in the house for drinking, cooking, ablution, sanitation, house cleaning, car washing, garden watering and lawn sprinkling.

Agriculture water, which includes water used for crops, livestock, horticulture, greenhouse, dairies and farmsteads, is the largest user of water in the world and in South Africa in particular. It accounts for about 70 percent of the available water that is used in South Africa (Fuggle & Rabie, 1992: 380).

Trade water includes water used in industries, factories, stations, docks, shops and offices. Public water is water used for watering street flowers, public parks, fire fighting and other public places.

A loss is the water that is always leaking from the consumers, premises, misused or unnecessary wasteful use of water by consumers. This also includes water leakages from main pipes. Twort (1996) further indicates that in most countries all suppliers a metered except stand pipe and public suppliers.

4.4.3. Water Supply Constraints and the Impact to Consumer as Respondents

The respondents as consumers need water for their survival because there will be no life if water is not provided. During the interview the respondents mentioned the problems of water supply emanate from the Department of Water Affairs and Local Water Committee who is the local torch – bearers to make water available in the township. They maintained that the Department lacked commitment to deliver on its mandate

The key problems associated with water problems included shortages of skilled professionals in the local government of the area to manage water activities. Burst and leaking pipes are reported by respondents as some of the problems such leakages lead to diseases such as diarrhoea. Respondents further mentioned about dry taps which are without running water and this promotes the problems of failure to bath on children.

In the business sector, respondents who are entrepreneurs find it very difficult to kick - start some of their daily programs due to poor water supply. Some mentioned vandalism as one of the contributing factor to water losses which affect the community. It takes many days for the burst pipes or vandalized to be repaired by officials from the Water Providers in the Municipality. The general impact to consumers, when there is no water supply, is that daily activities fail to kick start and schooling is affected as learners come after normal time as they are delayed by water problems.

4.4.4. The Community's Perceptions on the Effectiveness of the Municipality in Dealing with Water Supply Challenges

During the interview with respondents from the households the researcher asked them this question, "What is their thinking about water related supply as the underlying reason for poor water situation"? From their responses, a number of issues were raised as the contributors of poor water supply in the area.

4.4.5. The Expectations of the Community with Regard to Solutions to the Problem of Water Supply Service

All the respondents alluded to the irregular water supply services in Lenyenye township. To the respondents' expectations, the problems should have been stopped a long ago. The respondents maintained that in some areas, especially low lying areas, water becomes available for many hours, which may be four to five hours, and the interruptions are for only one or two hours as compared to high lying areas.

The expectation is continuous and uninterrupted supply of water throughout the day. The solution from the respondents to this problem is to improve the storage capacity of the dam and to trace the leakages on the main pipe and disconnect the illegal connections done by villagers as the respondents are the ones who are paying for the water and the illegal connectors steal.

4.4.6. Satisfaction with Water Supply Services in Lenyenye Township or Not Satisfied

The dawn of democracy and new government in South Africa came along with new programmes that were aimed at improving the quality of life of the majority of all South Africans. At the dawn of democracy in South Africa, there were an estimated 12 million people or more who were without adequate water supply services. Among these people, the residents of Lenyenye have already tasted the salt of living without adequate water supply services and basically they were found to be not satisfied.

This was discovered from the responses of the respondents during the interview. However, between 1994 and 2003, South Africa has made great strides in reducing the gross inequality of water supply services in some areas (DWAF, 2003: 06). Dissatisfaction would come to the end if the Water Providers could fast track basic service delivery to the concerned communities as the respondent mentioned the reason for this concern.

When addressing the National Freedom Day Celebration held at Galeshewe Stadium, in Kimberly, the Northern Cape on the 9th of August 2006, the president of the day, Mbeki appealed to all Government Departments and Municipalities to consider basic service delivery to the people as a priority. He described service delivery as central to South Africa's liberty, because the country cannot celebrate and claim to enjoy freedom while her people have no adequate clean water.

Respondents during interview responded that they are not involved in water committees as they should be. This showed dissatisfaction about water supply service. Dissatisfaction by the respondents was fuelled by the conditions observed on the following topics which have direct impact on the lives of the residents as consumers of Lenyenye Township.

4.4.7. Poor Local Governance

Consumers attribute poor delivery of water supply services to quality of Local Governance. In particular, governance structures are supposed to help in the effective supply of water. A concern was raised by the respondents in the Local Governance that there was lack of ward committees who would be responsible for communication and management of water supplies.

The impact of illegal connection proved to increase the dissatisfaction of the respondents about the villagers who vandalize the water supply system. Another problem is the non – servicing of the boreholes as substitutes to the dams.

4.4.8. Vandalism and Illegal Water Connections

The water providers responsible for repairing damaged taps and burst pipes, indicated that vandalism of copper taps was rife in the area and the households were always reporting broken taps which the thieves break in exchange for money. When taps are vandalized, water is lost and the households suffer in terms of water supply. In the end, they loose hope on the leadership or councillor of their ward.

4.4.9. Inadequate Water Supply Infrastructure

From the water providers, the water sanitation manager who was interviewed also indicated the issue of water supply infrastructure as part of the constraints that had derailed the water supply service in Lenyenye township. This become an open secret to consumers and contributed to the dissatisfaction levels.

At the moment, the municipality has one supply dam as the catchment area which is without any reliable boreholes. Although the dam proved to be overflowing with water, the township is still surviving by water from a single and very old reservoir built about four to five decades ago.

The water demand, as the researcher writes, stands at around eighty percent as the new extension in the township was not budgeted for in terms of water supply and sanitation. The storage capacity of the single dam is below the required water demands. The mushrooming of squatter camps was mentioned as a bitter problem to the controlling administration of water supply and sanitation.

The manager representing the water providers responded about reservoirs which are not being used to save water for Lenyenye. In this, one concluded that there is some reluctance by officials of the municipality to clean and refill the dam with water in an attempt to reduce the shortages of water supply. The taps installation by the first Minister of water, Mr Ronnie Kasrils was never effective in the township, taps are still without running water.

CHAPTER 5

5. CONCLUSION AND RECOMMENDATIONS

5.1. Introduction

The aim of the study is to investigate the water supply services in Lenyenye Township. The study assessed whether institutions such as Water User Association, the Water Services Authorities in the Municipality were able to make water accessible to consumers as a mandate from the Department of Water Affairs and Forestry. Respondents were sampled from Water Provider Institutions and from the households.

The main findings are based on the respondents and the water providers as they are a potential solution to water supply services. The research utilized questionnaires to collect answers from the respondents.

5.2. CONCLUSIONS

5.2.1. The Ages of Household Respondents

The research findings of the study discovered that respondents, as heads of families were between the ages of eighteen and sixty years.

The percentages of household members showed that 55% of the respondents were between the ages of 31 – 40 years, and another percentage of 35% were between 18 – 30 years of age. Among these available respondent groups, there were the ages above sixty years who responded to the research interview and their percentage stood at 10%.

This showed that many households are headed by the youth and the middle aged people. From the total individuals as respondents, there was 70% of the parents and 30 percent of the youth who participated in the interview that was conducted in the area.

5.2.2. Educational Qualifications

The education and qualifications of the respondents are key aspects to determine their source of income. In this study, the respondent's qualifications ranged from primary education, secondary (matric), tertiary and work related training education.

The matriculants appeared to be the largest in number as they stood at 60 percent. They were followed by those individuals with tertiary education at 20 percent. These educational qualifications were influenced by the existence of the local two secondary schools and many primary schools in the township.

5.2.3. Sources of Income for the Respondents

The majority of the respondents in the sample are government employees at 35 percent and one finds that there is 30% of respondents surviving with social grant provided by government.

The poverty levels are at 20 percent of respondents who do not have income at all and one would wonder how these groups of individuals make a living.

Source of income is a way or benchmark where a better life is being measured and from the sample, self employed respondents are just few as it stands at 15 percent as the table indicates.

5.2.4. The Extent of Satisfaction or Not Satisfaction

The respondents responded that they are not satisfied with water service delivery in Lenyenye Township. One responded that the water supply service was satisfactory. Many households responded by indicating that they are not satisfied with water service provided by Greater Tzaneen Municipality.

5.2.5. Situation Analysis and Status of Water Supply Service in Lenyenye Township

Lenyenye township comprised of about 2000 household where about 31.78 percent of the residents receive RDP standard water supply of about 6 litres per person per day, and the capacity of the bulk purification plant is 2.3ml to 4.6ml as per Greater Tzaneen Municipal IDP final for 2007 – 2011. This means that water that is purified and supplied to households is inadequate in Lenyenye Township. The situation needs urgent attention to rectify the problem of water supply services. The water status is not competent with the expectations of the respondents who are paying services for the water every month end.

5.2.6. Different Uses of Water in Lenyenye Township

Several water uses have been identified. Basically, water serves as a foundation for human survival. No species or living creature can survive without water. In this area of study, respondents mentioned the different uses of water namely, water for consumption, domestic water, water uses for drinking, cooking, ablution sanitation, house cleaning, car washing, garden watering and for lawn sprinkling. As such water serves as a lubricant for household activities and toilets flushing which if it is without water, possibility of diseases is unavoidable in the households and public places. It prevents cross infection to one person to another in the hospital. If you do not wash your hand before and after the procedure with soap.

5.2.7. Water Supply Constraints and its Impact on Consumers

Everybody needs water for personal use such as cleaning, drinking and for washing. Life depends on water for species to survive. Respondents confirmed water shortages, weekend and every day supply, water is only available in the morning from six to eight. After these hours, taps run dry. The cause for this water interruption from research findings is inadequate storage capacity which is not corresponding with the demands in the township.

The impact of the shortage of water in the households will result in the possibility of some diseases such as cholera, flu and others. As is reported by water providers, are illegal connections, bursting pipes and poor water management caused by poor skills of

management. All these problems have a negative impact to the consumer as some of their activities and programmes are compromised.

5.3. RECOMMENDATIONS

Based on the findings of the study the following are made:

5.3.1. Prioritization of Effective Water Supply for Lenyenye Township

Given the dire need of the water as a basis for life and the dissatisfactory water supply situation in Lenyenye township, Greater Tzaneen Municipality should ensure that household consumers receive water or are supplied with adequate water as a priority. It is within the mandate of the Municipality to ensure that clean and affordable water is supplied on a daily basis to the residents of Lenyenye Township without interruptions.

Whilst addressing the long term constraints, the community must have short term strategies to improve water supply to the households. More boreholes should be opened to substitute the direct supply of water from the Ramodike dam as the only water supplier. Above all suggestions, the Municipality should also support the community in ensuring that there is proper control and maintenance of all water projects. This would ensure that water is delivered on a daily basis as expected by the consumers.

5.3.2. Community consultation and Participation

An improved consultation with the community by the government will contribute towards a more effective communication and engagement between the consumers and the Municipality. The Ward Councillor should be more effective in ensuring that there is enough interaction with the community. The councillor should periodically update only one member about progress regarding the implantation of the RDP of the Municipality.

5.3.3. Addressing Capacity Constraints at the Municipality

The Municipality has to address the capacity constraints which have been outlined in the study.

- Human Resource

The human resource as a problem should be dealt with quickly by the Municipality by ensuring that more technicians are employed to be able to speed up water supply services and delivery. Another constraint that needs to be attended to is the delay of the transfer of skilled personnel from the Department of Water Affairs to the Municipality.

The delay of the transfer of these skilled personnel has contributed greatly towards lack of water services in Lenyenye Township. It is evident that the technicians working in the area of study alone are insufficient to render the service.

The population in Greater Tzaneen Municipality proves to be growing at an alarming rate. This means that the demand in water supply services is also high. DWAF should speed – up the transfer of more officials to Lenyenye as the water supply service are at a critical situation which need the attention of more experienced personnel.

The WUA that is involved in the water supply services for Lenyenye should continue to allocate water to all users equally by ensuring that South African water sector motto which says “some for all, not all for some “is maintained.

- Water Service Infrastructure

The inadequate water supply services infrastructure in Lenyenye has been labelled as a major constraint that has made it difficult for the Municipality to deliver water services to the community. The area has about four reservoirs from which only one is used for water supplies while the other three; two of which are very small and old, are just been left unused including the newly built one.

The challenge that these dams pose to the Municipality is that the storage capacity is below the required water demand. The only dam for storage purpose has a capacity of 3,25 cubic metres and this is expected to supply a population of about 12270 of Lenyenye in Greater Tzaneen Municipality and is expected to supply also the surrounding villages of the township and also to help those villages along the main line.

The storage capacity does not meet the required demand for water in the supply of Lenyenye as it is expected. Officials from water supply services could not find a replacement for a better infrastructure to satisfy households supply.

Rainfall helps with little water, but as this rain water is not safe for consumption, at certain times water end up boosting the supplying dam of Ramodike, which provide water to the reservoir that finds it difficult to supply the households and the business. The Department of Water Affairs should ensure that water services and infrastructure are provided to the Local Municipality in order for them to function properly. There is a serious need for the construction of a new and big reservoir which will match the demands of the entire community.

- Skills Development

The responsibility of the Greater Tzaneen Municipality should be to ensure that the right people or officials are available and accessible to supply people with water services and solve their water problems. For the quality services to be delivered, relevant people must be appointed at the right place for the benefit of the community and the public at large.

Taking into consideration the conditions under which officials are appointed in different department of the Municipality, skilled people with some experience in the water supply service should be employed in Greater Tzaneen Municipality, especially at Lenyenye Township so as to increase the improvement on strategies for water supply services in the area.

More training of employees and officials dealing with water supplies for Lenyenye Township should continuously be conducted to try and improve water demands for the households.

The Municipality should also involve community members to use water and supplied services because they are the custodians of the water in the area.

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APPENDIX A

INTERVIEW QUESTIONNAIRE USED AT HOUSEHOLDS:

A. PROFILE OF RESPONDENTS N.B. (Tick the relevant block:)

1.

Male	
Female	

2.

Pensioner	
Unemployed	

3) AGEOF RESPONDENTS

1 – 18	
18 - Above	

A. SITUATION ANALYSIS AND WATER SUPPLY SERVICES STATUS WATER COLLECTION

1. Where do you collect your household water?

Community tap in the yard	
Community tap in the street	
Private Borehole	
From the well	

2. Are you satisfied with the type of Water Supply Services rendered?

Yes	
No	

B. INFORMATION ON WATER SUPPLY AND PERCEPTION BY COSUMERS

1. What are the water supply problems faced by you as consumers.

2. What do you think should be done to ensure that there is uninterrupted provision of water supply in Lenyenye Township?

3. What are the expect ions of Lenyenye community on water supply?

4. Does the Greater Tzaneen Municipality consult the community about water supply problem?

C. THE DIFFERENT USES OF WATER AND CHARGES

1. What do you use the water?
- Livestock drinking
- Cooking
- Washing
- Business or other

2. How many hours as estimated do you receive water in your area in the morning and afternoon :_____

3. Are you paying for the water supplied? Estimate in terms of rand per month ± R200, 00? Or more?

4. How is water been supplied to household?
- Taps
- Self fetch using buckets?

APPENDIX B

AN INTERVIEW QUESTIONNAIRE SCHEDULE FOR THE REPRESENTATIVES OF WATER PROVIDERS: A CASE STUDY OF LENYENYE TOWNSHIP.

1. What are the problems that hinder the institutions dealing with water supply fails to deliver water in Lenyenye Township?

2. How would you rate the quality of services rendered by the Greater Tzaneen Municipality in Lenyenye Township?

Better	
Improved	
Poor	

3. What is the main responsibility of the water services authority?

4. What impact does the inconsistency of water supply services have on the people or households in Lenyenye?

5. What are the Physical challenges faced by the Institution of water supplies in the area?

6. Are some strategies put in place to improve the poor water supply of Lenyenye?

_____

_____

_____

_____

APPENDIX C

A COPY OF: THE MAP OF LENYENYE TOWNSHIP, SCALE NUMBER: 1: 5 500

LENYENYE
SKAAL 1: 5000
JANUARY 2001
LO 31
EXT. 1
EXT. 3
LENYENYE
LENYENYE
Cemetery
LENYENYE
PROKLAMASIEGEBIED
GROTER TZANEEN MUNISIPALITEIT
GREATER TZANEEN MUNICIPALITY