

**THE EFFECTIVENESS OF MUNICIPAL WATER SERVICE DELIVERY IN
HLUVUKANI COMMUNITY IN BUSHBUCKRIDGE. MPUMALANGA**

by

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DECLARATION

I **MOGAKANE MOSES MBOTHI** declare that this work is mine and has not been previously submitted in any form by myself or anyone else in this university or any other educational institution for any degree or examination purpose.

All sources used in this study have been acknowledged.

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Signature

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Date

DEDICATION

I dedicate this work to my beloved late mother **Esther Sekgobela** who passed on while I was still young and my uncle **Leaf Mogakane** for his contribution towards my education.

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- To my Lord and Creator I would like to say: You are the Alpha and Omega.

ABSTRACT

This study reflects on the effectiveness of municipal water service delivery in Hluvukani community in Bushbuckridge, Mpumalanga. Since the study wanted to have an in-depth understanding of the strategies/methods that the municipality use to deliver water services effectively in Hluvukani, both the qualitative and quantitative research approaches were used. It is within these methodologies that a case study was adopted to seek to deepen the strategies used by government and municipal officials to address the challenges of water experienced by villagers in Hluvukani. Three methods of data collection were used, namely: interviewing, non-participant observation and documents. Hluvukani village was selected as a site for the study by means of purposive sampling. The participants interviewed included the municipal manager, the municipal officials, Hluvukani villagers and officials from the Department of Water Affairs. The documents consulted included the municipal IDP and the 2015/2016 Municipal Budget. This study found that villagers have difficulties in accessing water at Hluvukani and the water service delivery was not effective even though the municipal manager claimed otherwise. This was manifested by the strategies that were used to delivery water such as using delivery trucks to supply water to Hluvukani villages every two weeks. This, the researcher found ineffective as people had to live without water delivery for a period up to four weeks.

LIST OF ABBREVIATIONS

BLM	Bushbuckridge Local Municipality
DWARF	Department of Water Affairs
DWEA	Department of Water and Environmental Affairs
IDP	Integrated Development Plan
IWRM	Integrated Water Resource Management
RDP	Reconstruction and Development Programme
RSA	Republic of South Africa
SGB	School Governing Body
NWCPC	National Water Conservation and Pipeline Corporation
WHO	World Health Organisation
WSDP	Water Service Development Plan

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CHAPTER 1

1.1 INTRODUCTION AND BACKGROUND

1.1.1 Water services delivery in South Africa

Access to safe drinking water is a fundamental human need and therefore, a basic right. Contaminated water jeopardises both the physical and social health of all people and it is an affront to human dignity (WHO, 2004). The provision of sustainable water to communities is presently a top priority of the South African Constitution. However, in rural areas where water supply exists, drinking water quality is often poor and could not be considered safe.

Under apartheid, the Department of Water Affairs (DWARF) focused on dams and bulk water for commercial and agriculture purposes. After the country became a democracy in 1994, the government committed itself to the aims of Reconstruction and Development Programme (RDP) which set ambitious targets for water provision, DWARF formulated a White Paper on Water Supply and Sanitation. Water service delivery is a common problem globally and in most of the municipalities in South Africa. The general problems in municipalities are lack of service delivery, corruption, nepotism and shortage of water delivery. South Africa also experiences shortage of water especially in rural areas. The shortage of water is a problem that has led to many service delivery protests in most of the municipalities including Bushbuckridge which has experienced continuous service delivery protests that have been attributed to the shortage of water. For the past three years, residents of Bushbuckridge, especially in the *Hluvukani* area, complain about the shortage of water and this is a cause for concern (Bushbuckridge Local Municipality, IDP for 2013- 2016),

Burke (2005) stresses that since ancient times water has been compared to life. Research has since shown that 60% to 70% of an adult's body of weight is water, suggesting that there is an important link between water and human life.

The effective application of fresh water as a scarce resource that is essential for the human race to survive is increasing, due to the growing population or improved living standard, and is reaching the limit of the available water resources.

1.1.2 Challenge of water service delivery in Bushbuckridge Municipality

The challenge facing the municipality with respect to addressing the delivery of water is lack of funds and nepotism. Various water projects that were meant to address the shortage of water in the Hluvukani area have either been diverted to other areas or terminated due to lack of funds and waste of money that has been diverted to other projects or misused for other personal enrichment purposes'. This is in sharp contrast to the duties of Bushbuckridge Local Municipality IDP for 2013-2016 which are outlined in the Bushbuckridge Municipality that it will strive to achieve the objectives set out "to deliver services to the people of Bushbuckridge".

Lack of effective service delivery of water in many communities has resulted in many service delivery protests. Protests soared in South Africa in 2009 in response to poor services, unresponsive councillors, on-going job losses, and other grievances, as many protests were recorded in 2009 as in the previous five years combined, with high levels already recorded in early 2010 (Burke, 2005). By law, municipalities are required to design IDP's that will outline their programmes for service delivery. The Constitution of the Republic of South Africa (Act 108 of 1996) is the supreme law of the country and fundamentally aims to protect human rights and promote democratic governance. It provides a new approach to government on national, provincial and local government levels.

The Municipal Systems Act section 2 (2000) requires that municipalities draw up an Integrated Development Plan (IDP) - a Strategic Plan, which all developments in a municipal area are based upon. The IDP is the principal planning instrument that guides and informs the municipal budget.

It is a plan that not only concentrates on other provisions of municipal services, but also seeks to alleviate poverty, boost local economic development, eradicate unemployment and promote the process of reconstruction and development. This means that Bushbuckridge Local Municipality is obliged by law to ensure that water service is provided to the people of Bushbuckridge and Hluvukani. The municipality's strategy of service delivery is informed by the Accelerated and Shared Growth Initiative of South Africa (ASGISA) and the National Spatial Development Perspective (NSDP).

Furthermore, Bushbuckridge Local Municipality has the mandate (2013-2016, IDP) to provide free basic water service in terms of the National Framework. Water supply to communities remains a challenge, however. According to the 2013-2016 IDP for Bushbuckridge Local Municipality, the municipality has developed water development plan which was adopted by the Council in 2010, which will be used to address the back log of water supply in various settlements including Hluvukani.

According to Bushbuckridge Local Municipality's IDP, 55% of people in remote areas experience water shortages. This amounts to R10 billions of rand needed to address the problem. The water service development plan has prioritized that in the next three years Bushbuckridge should be at 95% of areas that have access to water services. Bushbuckridge Local Municipality is a category B municipality that forms part of the five Local Municipalities of the Ehlanzeni District Municipality family in Mpumalanga Province. It is renowned for its agricultural and tourism attractions and it was declared a nodal point by the president of the Republic in 2001 (IDP, 2014).

Accordingly, from 1996, 2001 until 2011 the percentages of people with access to tap water has decreased in the municipality from 80%, 75% to 62% respectively (IDP, 2013) while other services increased. The Bushbuckridge Local Municipality is one of the few municipalities in Mpumalanga with huge water supply backlogs. To remedy this, the municipality introduced three main bulk supply pipelines. The pipelines that connect to the Marite community in the south east and the Hluvukani community in the north east of Bushbuckridge have been completed and were fully operational in 2011.

Water is an important resource to human life and to the health of the environment. Water shortage in South Africa is mostly caused by unreliable rain, more demand for water from agriculture and industry. The biggest challenge regarding water and development in South Africa is the provision of basic water services to all and in particular the poor. The provision of services to the poor is however only one of the challenges for sustainable development in the water industry. Other challenges relate to weak institutional capacity of the water services industry, and the economic unavailability of service provision, environmental degradation of water resources and the availability of sufficient water resources also exist. Without water, certainly people, plants and animals cannot survive.

There is a need to get clean water in order for people to be healthy and strong and in order to lead normal lives. According to the National Water Resource Strategy for South Africa (2002) water gives life. It waters the fields of farmers, it waters the crops of rural communities and it provides plants and animals that make up our natural heritage. In order for people to live healthy lives they need water. Reliable, safe drinking water, water for sanitation and hygiene and water for growing crops is critical to alleviating poverty in South Africa. Rural development and urban renewal both depend on water to achieve their goals (National Water Resource Strategy for South Africa 2002).

The government is charged with the responsibility of supplying clean water to communities. There is a need to ensure that there is water in rural and urban areas. The National Water Act (36 of 1998) provides considerable support from the Working for Water Programme. This Act states that “No person may unlawfully or intentionally or negligently commit any act or omission. Therefore failure to comply with this Act is a criminal offence. As a response to the shortage of water in South Africa, the Working for Water Programme was introduced in 1995 in order to maximize water supply.

WFW programme’s mission is to control invading alien species and to implement the process of economic empowerment and transformation. Other aims are to improve ecological integrity and to protect biodiversity, to restore the productive potential of land and promote a sustainable use of natural resources, to develop economic benefits from land water and people (<http://planet.uwc.ac.za/nis/invasives>). Hluvukani is one of the rural areas in Mpumalanga Province that has a shortage of water. Villagers struggle to get water and as a result, they are forced to travel more than 10 kilometres to the nearby town of Acornhoek to fetch water. Hluvukani Village is located in Bohlabela Region in Mpumalanga Province, South Africa. There are approximately 50 000 living in Hluvukani (Bushbuckridge Local Municipality, IDP, 2013-2016).

Most of the people work on nearby farms and mines. Some are unemployed. Hluvukani is one of the poorest and very remote areas in Mpumalanga Province. According to Bushbuckridge Local Municipality –IDP (2012/13) a strategy is in place to provide water to the communities. Strategy A is the provision of portable water by the municipality through bulk supply, reticulation, purification and storage infrastructure. Bushbuckridge is a water scare area with only Inyaka Dam as the main source of water. Bushbuckridge has at least 70% of the communities without bulk water supply and almost 60% without tapped water and at least 75% without yard water connection. The majority of the communities (an average of 70% of the population) still rely on water from the boreholes for water that may be contaminated due to back yard burials and pit toilets in the rural areas.

1.2. PROBLEM STATEMENT

In South Africa in general the issue of water supply is a major problem. South Africa is a water scarce country with extreme climate and rainfall fluctuations. South Africa's water usage typically comprises of 77% surface water, 9% groundwater, and 14% re-use of return flows (Bushbuckridge Local Municipality IDP, 2012-2013). Management of South Africa's water resources involves catchment management, river systems, water storage, water abstraction and return-flow management. Integrated management techniques are required to ensure that water is both protected and utilized to its full potential Department of Water Affairs (DWA, 2012:34).

In the latest municipal IDP 2013/2014, lack of sufficient bulk water supply, reservoirs and reticulations was listed as a challenge. This challenge affects the day to day living of municipal dwellers, for without running tap water people resort to polluted river water which impacts their well-being. The problem of lack of water in the village will also lead residents to depend on wells for water. What is known about the problem is that lack of water is a cause for concern. In the 2012 IDP the municipality had planned to reduce the current backlog by 40% by 2013, which is still not in place.

Residents of Hluvukani village need water for their basic needs: drink, cook and use it for their livestock as well as use it for their housing projects. Water is a basic commodity and there is a need for Hluvukani residents to have water in order to live. There is a need for the municipality to provide water in order for the residents to live healthy lives. Water is life. According to the National Water Resource Strategy for South Africa (2002) water gives life. It waters the fields of farmers, it waters the crops and stock of rural communities; it provides recreation; it supports our electricity generation, our towns and cities, our mines, our industry and plants and animals that make up our natural heritage.

The context of the problem is the supply of water. Residents of Hluvukani experience shortage of water. They need water to drink, cook, wash, bath and to feed their animals. They also need water for irrigation and farming purposes. The problem resides in the supply of water by the municipal offices. Residents only manage to get water once after two months. This is not enough for them to feed themselves, their livestock and to generally live healthy lives as water is an important resource. The problem is a cause for concern because shortage of water results in children not going to school on a regular basis because they have no water to use for bathing. Local schools also have no water to use for their nutrition programmes and as a result children suffer.

1.3. MOTIVATION/RATIONALE FOR THE STUDY

The study is motivated by what the researcher has observed in the Hluvukani community where water shortages are causing problems of poor sanitation and diseases. Whereas consecutive IDP's in the municipality have included strategies to deal with the water problem, little seems to be happening. This study is also motivated by the need to see regular water supply in the Hluvukani area. Residents are in dire need of water and it is of utmost importance to ensure that the problem of water shortages is addressed as a matter of urgency. Water as an important resource is needed in the area.

This study will explore what the municipality has already done and what they are doing in order to address water supply challenges in Hluvukani. There is a need to come up with effective strategies that will help to deliver water in the area. Residents of Hluvukani need water to use in their daily lives and in order to have effective water service delivery in the area; the municipality should improve their methods of supplying water to the community. Water as an important resource should be supplied to the people on a regular basis. This will help them to conduct their normal businesses and to live healthy lives without worrying about the shortage of water and its consequences thereof.

1.4. SIGNIFICANCE OF THE STUDY

The study will contribute to existing body of knowledge and obstacles to water service delivery. There is a need to explore what is known about the problem in the area and also the obstacles that hinder water service delivery in Hluvukani. The study is also expected to inform the government and municipal officials on the strategies to use in dealing with water service delivery. There is a need for municipal officials to come up with strategies that will ensure that there is effective water supply in Hluvukani. People need water to drink and also feed themselves and their livestock.

1.5. AIM AND OBJECTIVE OF THE STUDY

1.5.1 Aim of the study

The aim of this study is to determine the effectiveness of Bushbuckridge Municipality water service delivery to communities.

1.5.2 Objective

The following objectives will be investigated

- To evaluate the performance of the municipality in the delivery of water services to Hluvukani community. There is a need to evaluate how the municipality is performing in terms of water service delivery in the community.

1.6. RESEARCH QUESTIONS

In an attempt to research on the effectiveness of water service delivery in Hluvukani community, several research questions were generated. The main research question that guided the study was: How effective is the municipality in delivering water services?

Subsidiary questions meant to assist in answering the main question were also generated. They are:

- What constitutes the water delivery system?
- What factors contribute to poor water delivery?
- What strategies are being implemented?
- How are the strategies working?
- What are the obstacles to water delivery?
- What factors contribute to poor water delivery?

The study also used two null hypotheses to test objective one and two

Hypotheses:

- The performance of the municipality in delivery of water services to Hluvukani community is poor.
- There are no factors influencing its delivery performance.

1.7. LEGISLATION ON WATER SERVICES DELIVERY

The Water Services Act No.108 of 1997) of South Africa states that water service delivery is the responsibility of local government as Water Services Authorities. The principal legal responsibility is to complete a Water Service Development Plan (WSDP) every 5 years with annual review. The overall objective of the Water Service Act is to assist municipalities to undertake their role as water services authorities, and to look after the interests of consumers. It also clarifies the role of the other water services institutions, such as water services providers and water boards. This Act gets its mandate from Section 27 of the Bill of Rights in the Constitution which states that everyone has the right to have access to sufficient food and water, and the State must take reasonable legislative and other measures to achieve the progressive realization of these rights.

The WSDP encapsulates all the responsibilities and tasks required in water service delivery. However, it does not spell out local government's role in water resource protection or its responsibilities as far as integrated water resource is concerned. It is well known that in South Africa that there is a challenging level of inadequate capacity in technical and administrative skills in local government to adequately fulfil water service delivery. A framework is provided in this study within which improvements can be brought about, with guidance on how to engage in the practice of integrated water resource management (IWRM) in the context of the WSDP (Burke, 2005). The framework provides a guide for a municipality to first accomplish an adequate WSDP, and then gradually implement IWRM.

The Bushbuckridge Local Municipality has developed water service development plan which was adopted by Council in 2010 and the plan is used to address the back log of water supply in various settlements. Burke (2005) stresses that integrated water resource management (IWRM) is such a process and it promotes the co-ordinated development and management of water and land so as to maximize

economic and social welfare without, compromising the sustainability of vital ecosystems (Global Water Partnership, 2000; DWAF. 2004a).

One of the aims of IWRM is to improve all aspects of water resource management progressively- the way we collect water, store water, distribute water, conserve water and keep water pure. IWRM thus aims to find a balance between the social, environmental and technological perspectives of water resource management. The South African National Water Act (Act 36 of 1998) (NWA) promotes an integrated catchment-based approach to water resource management. The law promotes a more equitable and sustainable use of water and makes water 'everybody's business.

Local government being strategically located between the national policy-making level and water consumers has a significant role to play in water management and in engaging local communities to participate in IWRM processes. The legal framework for the role of local government structures was established in the Water Service Act of 1997. The Act specifies the provision of water and sanitation services as a function of local government, noting that the national and provincial government must 'by legislative or other measures support and strengthen the capacity of local government to manage their own affairs, exercise their powers and perform their functions. The role of DWARF has been conceived as a regulator of water provision through development, monitoring and coordination.

Although the Water Service Act does not specify the level of local government that is to be responsible for water services, the Municipal Structures Act specifies that this is a type C or District Council responsibility. This means that a change in responsibilities can only be effected legislatively, although it needs to be noted that the Act allows for provinces to delegate specific responsibilities to local government in selected areas. This Act legislates and provides the framework for the way in which water resources must be protected, used, developed, conserved, managed and controlled. In addition to Section 27, this Act also gets its mandate from Section 24 of the Bill of Rights in the Constitution, which states that everyone has the right to

an environment that is not harmful to their health or well-being, and to have the environment protected for the benefit of present and future generations through reasonable legislative and other measures.

The Municipal Structures (No. 117 of 1988), Act 37 is also known as the “Structures Act” and it deals with setting-up the basis for establishment of new municipalities, defining the way municipalities are to be established, establishing the way councils are to function, determining the division of powers and functions between municipalities. In this regard, District Municipalities are responsible for bulk water supply, bulk sewage purification works and sewage disposal that affect a significant proportion of local municipalities. The remaining functions are delegated to local municipalities.

1.9. DEFINITION OF CONCEPTS

Concepts are important because they determine what the researcher knows and believes in and to a large extent what the researcher does for the reader to understand the context clearly; key concepts need to be defined. Concepts result from the elaboration and combination; they are trying together or link discrete sensory experience. The following concepts occur frequently in this study. They are now defined in order to avoid misinterpretation.

Water Services

According to the Strategic Framework for Water Service Act 108 of 1997, water services entail the provision of a basic water supply, the sustainable operation and the communication of good water use, hygiene and related practices. In this research study water services entails the supply of water to Hluvukani community by the municipality

Water Service Provider

A Water Services Provider is defined as any person who has a contract with a water services authority or another water service provider to sell water to or accept wastewater for the purposes of treatment from, an authority or provider and or a water services authority that provides either or both of the above services itself. In this research study, water service provider is the Bushbuckridge Municipality which is charged with the responsibility of providing water to the Bushbuckridge community (Burke, 2005).

Health

Health is the level of functional and metabolic efficiency of a living organism in humans. It is the ability of individuals or communities to adapt and self-manage when facing physical, mental or social changes (Huber et al. 2011).

Effective

Effective is the capacity of producing a desired result. When something is deemed effective, it means it has an intended or expected outcome, or produces a deep, vivid impression (Drucker, 2006).

Service

Service is a valuable action, deed, or effort performed to satisfy a need or to fulfil a demand. In this instance service means work done by the municipality to the people of Hluvukani (Drucker, 2006).

Community development

The United Nations defines Community development broadly as “a process where community members come together to take collective action and generate solution to common problems” (UNTERM, 2014).

1.8. ETHICAL CONSIDERATIONS

Permission to conduct the study was sought from the local authorities (Headman and the traditional authority).The recruitment of participants for the researches were conducted in an open and democratic way. Ethical issues namely: informed consent, confidentiality, respect, anonymity and discontinuance were also observed.

1.8.1. Informed Consent

The principle of informed consent arises from the subject’s right to freedom and self-determination. Being free is a condition of living in a democracy, and when restrictions and limitations are placed on that freedom they must be justified and consented to (Cohen, Manion, and Morrison, 2007; McMillan and Schumacher, 2001). Consent thus protects and respects the right of self- determination and places some of the responsibility on the participant should anything go wrong in the research. As part of the right to self-determination, a prospective participant has the right to refuse to take part, or to withdraw once the research has begun.

To comply with the requirements of this principle, all the participants were asked to sign a consent form and the following was done before the form was signed: a clear explanation of the procedures to be followed and their purposes; a description of the attendant discomforts and risks reasonably to be expected; a disclosure of appropriate alternative procedures that might be advantageous to the participants, an offer to answer any inquiries concerning the procedures; an instruction that the person is free to withdraw and to discontinue participation in the project at any time without being penalized.

1.8.2. Confidentiality

Confidentiality means that although researchers know who has provided the information or are able to identify participants from the information given, they will in no way make the connection known publicly; the boundaries surrounding the shared secret will be protected (Cohen, Manion, and Morrison, 2007; McMillan and Schumacher, 2006). To ensure confidentiality, the following were employed: deletion of identifiers, crude report categories and micro-aggregation (that is, the construction of average persons' from data on individuals and the release of these data, rather than data from individuals).

1.8.3. Respect

The principle of equal respect, demands that we respect the equal worth of all people (Cohen, Manion and Morrison, 2007). This requires us to regard people as free and rational, and to accept that they are entitled to the same basic rights as others. Privacy: this involves a right to control information about oneself, and protects people from unwarranted interference in their affairs. In evaluation, it requires that procedures are not overtly intrusive and that such evaluation pertains

only to those aspects of a teacher's activity that is job related. It also protects the confidentiality of evaluation information.

1.8.4. Anonymity

The essence of anonymity is that information provided by the participants should in no way reveal their identity (Cohen, Manion and Morrison, 2007; McMillan and Schumacher, 2001, 2006). A participant or subject is therefore considered anonymous when the researcher or another person cannot identify the participant or subject from the information provided. To ensure anonymity, the researcher used expressions such as Teacher A or Learner A in data analysis. The researcher avoided information that directly or indirectly helped identify the participants.

1.9. SUMMARY

The chapter has presented the challenge of water scarcity in the Hluvukani area. It provided a brief historical background about the problem in which it emphasized that water service delivery is a problem and a cause for concern not only in Hluvukani but in Bushbuckridge region as a whole. The chapter also presented the problem of the investigation which is to determine the effectiveness of Bushbuckridge Municipality water service delivery to communities. The aim and objectives were also outlined. Key research questions include: How effective is the municipality in delivering water services in the Hluvukani area? What constitutes water delivery system? How the strategies working and what are are the obstacles to water service delivery? As required in research, the ethical issues likely to be encountered in the study were discussed. Specific actions to address them were then presented. Chapter 1 presented the challenge of water scarcity in the Hluvukani area. The next chapter will highlight water service delivery in communities and the need for effective water service delivery including the theoretical framework outlining how water services should be effectively delivered.

CHAPTER 2: LITERATURE REVIEW

2.1. INTRODUCTION

This chapter highlights water service delivery in communities, the need for effective water service delivery, sustainability of water service delivery, the theoretical framework which outlines how water services should be effectively delivered and also the factors which promote effective water service delivery. The chapter further highlights the review of evidence on effectiveness of water services delivery and gives a summary of findings from other studies on the subject.

Water service delivery is a global problem. Most of the rural areas in South Africa experience water shortages and the delivery of water is not effective. In this chapter, a review of national and international literature dealing with water service delivery is reviewed. There are some countries that have been selected. They were selected because they have done research regarding the delivery of water in rural areas and also the need for people to have water in their communities. The researcher focused on countries such as Nigeria and Kenya and also South Africa.

Ndlovu (2001) argues that literature review helps to share with the reader the results of a study. It provides the framework for establishing the importance of the study and extends dialogue on the study. Leedy and Ormrod (2010) stress that literature review describe theoretical perspective and previous research findings related to the problem at hand. Its fundamental aim is to review what others have done in areas that are similar, though not necessary identical to one's own area of investigation.

Neuman (1997) argues that a literature review is based on the assumption that knowledge accumulates and that we learn from and build on what others have done. Scientific research is not an activity of isolated knowledge, which ignores others, findings are a collective effort of many researchers who share their results with one another and who pursue relevant knowledge as a community.

2.2. WATER SERVICE DELIVERY IN COMMUNITIES

Water service delivery issues rose in prominence among various reasons cited for protests. While this ascendance is remarkable, grievances over water services are not new. Water service delivery issues have been (and still are) a part of a range of conflated grievances that masquerade under the general rubric of 'service delivery' issues and underpin many rallying calls for social protest action. Although such conflation reflects the inter-relatedness of social services, it also masks the precise nature of the specific water service delivery issues in question. The review provides the context for water service delivery in South Africa and explains the role of different spheres of government. It also explains the theoretical framework and determinants of effectiveness of water service delivery. An attempt is also made to summarize existing studies which have been undertaken in this area.

The performance of any organization depends on natural and social variability of the locality and its physical, social and economic environments. Performance of organizations at local level was usually evaluated using the indices of economic gains, social benefits, equity, effectiveness and sustainability (Rajasekhar and Veeresekharappa 2003). In the case of local organizations, performance is the central concern and has a powerful role in local level planning. However, performance and its determinants are complementary and help to integrate and assure some minimum level of efficiency and sustainability. Hence, factors affecting

the performance of organization are equally important along with the performance of organizations as such. In this study, an attempt is made to analyse the performance of water supply institution in terms of effectiveness.

2.3. THE NEED FOR EFFECTIVE WATER SERVICE DELIVERY

Dollery and Wallis (2001) argue that effectiveness has been often used to access the overall performance of service delivery by an organization. Effectiveness is the extent to which a system achieves its programme and policy objective .The study went further to show that effectiveness encompasses a number of different desired aspects of service linked to programme outcomes objectives. On the other hand, Charles and Mertler (1993) have considered effectiveness as the optimal, hygienic and consistent use of water supply facilities to maximize benefits and minimize the negative consequences over a period of time. This study concentrated on effectiveness of the water supply system as an indicator of performance.

2.4. SUSTAINABILITY OF WATER SERVICE DELIVERY

In community based service delivery system, sustainability is defined as the capacity of the project to continue to deliver its intended benefits over a long time. The French Ministry of Economic and Financial Development (2008) define sustainability as the maintenance of an acceptable level of service throughout the design life water supply system. Sustainable water supply system means that it is sustainable, technically and institutionally and most importantly, eventual replacement or expansion of the system can be delivered within the existing framework. Sustainability in water supply involves, ensuring continuous availability of sufficient quantity and quality of water, within adequate institutional frameworks, applying sound management practices, appropriate technologies, and full-cost accounting, and effectively maintaining facilities and equipment (World Health Organization, 2004).

The entire sustainability of the water supply system consists of three aspects, i.e. institutional sustainability, financial sustainability and resource sustainability. This study will concentrate on institutional and financial sustainability of the water supply system. It defines sustainability as-

“The ability of the system to provide water supply benefits to the beneficiaries without interruption”.

Review of other studies has been done. A study done at Kerala, India, has shown that the management of drinking water in Kerala obtains importance at policy level mainly due to the state’s paradoxical situation of ‘scarcity in the midst of plenty’ as well as excess pressure on water demand due to high population density. Among the various institutions to manage water supply, the government led Kerala Water Authority (KWA) is the dominant player. The economic inefficiency of KWA along with environmental and resource constraints of the state, such as, the declining water table, loss of forest cover and high water runoff has led to the inefficiencies in state regulated public sector water services.

The state led water supply schemes were mainly concentrated in the urban areas and not able to meet the entire water demand of the state. Relative implementation cost in rural areas made the scheme town centred. As Drolley and Wallis (2001) point out one of the major deficiencies of the piped water supply systems in Kerala is its inability to meet full water requirement and total non- availability of water in the elevated areas. Along with diminishing water availability, poor financial performance with high revenue loss played an important role in the emergence of alternative institutional set-up in the drinking water supply system in Kerala.

Furthermore, a new approach is in place to address the inadequacies of state led water supply programmes, in the context of decentralized planning, which experiments community involvement in the provision of drinking water supply in different parts of the state. Their key conclusions were that performance of different institutional provisions for water supply was assessed by taking development outcomes such as effectiveness and sustainability of water supply schemes into consideration. The Kerala study found that the extent to which water was used for drinking and cooking purposes improved the participation and effectiveness of the water supply systems.

This implies that participation of the households in schemes depended upon the value of people assigned to the water supplied throughout these schemes. Because of the cultural habit of the people in Kerala, they perceived that only water obtained from the open wells was sustainable for drinking and cooking purposes. The lessons of Kerala show that there is a need to ensure that water is sustainable. In order to have effective water supply, there is a need to ensure its sustainability. In order to have effective water supply in Hluvukani, there is a need for the municipality to ensure that water is sustainable and that the water supply scheme is effective.

2.5. THEORETICAL FRAMEWORK

2.5.1. How water services should be effectively delivered

Water is an important resource. People need water to survive. They need water to drink, cook, and bath and clean. Without water life is not complete. Utsev and Aho (2012) argue that water is perhaps the most precious asset on earth. This is why it is important that drinking water should be safe and portable. Water is one of nature's

most important gifts to mankind. Essential to life, a person's survival depends on drinking water.

Utsev and Aho (2012) further stress that water is one of the most essential elements to good health. It is necessary for the digestion and absorption of food and it also helps in maintaining proper muscle tone, supplies oxygen and nutrients to the cells, rids the body of wastes, and serves as a natural air conditioning system. Indeed water is important in people's lives.

People need water to do their washing, to water their gardens, etc. It is therefore imperative to ensure that people have water in order to lead healthy lives. Utsev and Aho (2012) also argue that water is also a key component in determining the quality of our lives. Today, people are concerned about the quality of the water they drink. Access to safe drinking water has improved steadily and substantially over the last decade in almost every part of the world.

The local municipality is charged with the responsibility of delivering water to communities. At Hluvukani, the Bushbuckridge Local Municipality is responsible for water service delivery. This means that it is the responsibility of the municipality to ensure that the people of Hluvukani have drinking water. It is the municipality that should see to it that people have water to clean, feed their animals and for farming purposes. The IDP is a guiding document when it comes to prioritizing the delivery of water in communities. In each and every financial year, the municipality ensures that villages are prioritized to have water so that there can be effective water service delivery in different communities. Presently, there are no adequate water pumps and villagers of Hluvukani depend on wells and on people who have bore- holes for water.

2.5.2. Factors that promote effective water delivery

Effective water service delivery can be promoted by factors such as commitment from the local municipality, budget, skills and good infrastructure. There is a need for the Bushbuckridge local municipality to prioritize water as an essential service and to ensure that the people of Hluvukani are provided with effective water service delivery. The IDP should clearly outline the plans that are there to deliver water in different communities.

In this instance, the Bushbuckridge Local Municipality IDP should clearly stipulates or indicate the plans that are in place and also the funds that have been put aside for the water delivery service in Hluvukani and other villages under the local municipality.

According to Bushbuckridge Local Municipality-IDP Document (2012/13) strategy A is the provision of portable water by the municipality through bulk supply, reticulation, purification and storage infrastructure. Bushbuckridge as a water scare area with only Inyaka Dam as the main source of water has, at least 70% of the communities without bulk water supply, almost 60% without tapped water and at least 75% without yard water connection. The majority of the communities (an average of 70% of the population) still rely on water from boreholes, water that may be contaminated due to back yard burials and pit toilets used in the rural villages.

There is a need for the local municipality officials to commit themselves in ensuring that water is delivered at Hluvukani. Commitment is an important factor which encourages and promotes good progress because committed officials ensure that there is good progress within the scope of work. There is also a need to ensure that there is money in order to provide effective water service delivery. This means that Hluvukani village needs a budget for the provision of water. This means that in order to address the problem that has been identified, there is a need to ensure that there is money that will be used to buy for instance, new pumps and pipes that will supply water effectively to the villagers of Hluvukani.

2.5.3. Factors that hinder water service delivery

Corruption and nepotism within the local government structures contribute to poor service delivery. This is also because people may not deliver quality services because they lack the relevant skills. Poor service delivery is also blamed on the deployment of (African National Congress) comrades to positions for which they are not qualified. This also results to community protests which also hinder the effective delivery of services in the community including water.

The general feeling is that political leadership lacks responsiveness to issues raised by communities. In some cases, leadership is incompetent and corrupt, with a high degree of disregard to communities. Ward committees are also not fully operational, resulting in poor communication with communities. If people are dissatisfied with the delivery of basic municipal services such as running water, electricity and sanitation, they tend to protest especially in informal settlements. The reason behind these protests is that communities feel that politicians use them to get votes and they do not deliver on their election promises. Chuenyane (2009) found that property worth millions of rands was destroyed in Simile Township near Sabie, Mpumalanga Province during protests.

From the discussion of the theoretical framework, the study used an analytical framework which addressed the following key issues on water service delivery.

- Water governance

Water service delivery is governed

South Africa has undergone comprehensive political and economic reform since the end of apartheid in 1994. The Constitution adopted in 1996 guarantees the right to water for every citizen, stating that “everyone has the right to have access to sufficient food and water” (Republic of South Africa, 1996). It further obliges the state to ‘achieve the progressive realisation of each of these rights’ (Republic of South Africa, 1996). Before 1994, water management and governance in South Africa were

characterised by a technological approach based on supply management, a subsidized water infrastructure and technical solutions (Kranz et al, 2005).

Water law and water rights mirrored the apartheid system. The owner of a piece of land was entitled to use all water surface or underground water in his property. This meant that large parts of the population remained without legal water rights, because about 87% of the land belonged to the minority white population (Seetal and Quibell, 2005). The National water legislation in South Africa was not coherent. The responsibility of water supply and water management was fragmented among a number of different departments and other organizations.

On top of the constitutional changes the water law has been completely revised, stating with the White Paper on a national water policy (DWAF, 1997) and resulting in the Water Services Act (Republic of South Africa, 1997) and the National Water Act (Republic of South Africa, 1998). Water law foresees the transformation towards a holistic decentralized and participatory approach to water management with the aim of increasing water use efficiency.

The Water Act calls for the transformation from a water management system based on administrative boundaries towards management along hydrological boundaries. Furthermore, the Water Services Act and the National Water Act have established dual structure of water management and governance in South Africa. While the responsibilities of drinking water supply and sanitation are vested with the local government, the management, protection and use of the water resources remain the domain of the central government (Department of Water Affairs).

- Water Management Institutions

The national government is the public trustee of the nation's water resources, and is ultimately responsible for ensuring that South Africa's water resources are protected, used, developed, conserved, managed, and controlled in a sustainable and equitable manner, for the benefit of all persons, and in accordance with its constitutional mandate. The government also has the power to regulate the use, flow and control of all water in the Republic. The Minister of Water Affairs and Forestry is ultimately responsible for ensuring that water is allocated equitably and used beneficially in the public interest, while promoting environmental values (Department of Water Affairs, 2001).

- Policy and regulation

The Department of Water Affairs is the custodian of South Africa's water and forestry resources. It is primarily responsible for the formulation and implementation of policy governing these two sectors. It also has the overriding responsibility for water services provided by local government. The Department of Water Affairs (DWA) in the Ministry of Water and Environmental Affairs is primarily responsible for the formulation and implementation of policy governing water resources management as well as drinking water supply (Department of Water Affairs, 2001).

Regarding sanitation, "there is a worrying absence of regulation at all levels of government", according to an independent report. Around 2010, the sanitation function has been moved from DWA to the Department of Human Settlements (DHS), although some regulatory functions apparently remain with DWA", causing institutional confusion and responsibilities (South African Water Research Commission, 2013).

Free basic water policy

The Free basic water policy was first introduced in Durban in 1998 (Galvin, 2012). After Thabo Mbeki became president of South Africa in 1999 and a cholera outbreak in 2000, the African National Congress promised free basic water during the municipal election campaign in December 2000 and in July 2001 free basic water became a national policy through a revised tariff structure that included at least 6 “kilolitres” (cubic meters) of free water per month (40 litre/ capita/day for a family of five or 25 litre/ capita/day for a family of eight). The policy was being implemented gradually within the means of each municipality.

• *Water Services Act 1997*

In 1994, the government published its first White Paper on Water and Sanitation Policy, which led to the Water Services Act of 1997 (Republic of South Africa, Water Services Act, 1997)

- Service provision/ infrastructure

Responsibility for service provision is shared among various entities. The country’s 237 municipalities are in charge of water distribution and sanitation either directly or indirectly through municipality owned enterprises or private companies, government-

owned water boards are in charge of operating bulk water supply infrastructure and some wastewater systems, and the Trans-Caledon Tunnel Authority finances and develops dams and bulk water supply infrastructure (Molobela & Sinha, 2012).

- *Municipalities*

According to the Constitution of the Republic of South Africa (1996), Municipal Structures Act and the Water Services Act of 1997, responsibility for the provision of water and sanitation lies with water services authority, which the Water Services Act defines as the municipalities. There are 44 district municipalities and 237 local municipalities in South Africa (eThekweni Municipality, 2012)

- *Private sector participation*

Since 1994 some municipalities have involved the private sector in service provision in various forms, including contracts for specific services such as wastewater, short-term management contracts and long-term concessions (eThekweni Municipality, 2012).

- *Water Boards*

The 13 governed- owned Water Boards play a key role in the South African water sector. They operate dams, bulk water supply infrastructure, some retail infrastructure and some wastewater systems. Some also provide technical assistance to municipalities (eThekweni Municipality, 2012).

- *Trans- Caledon Tunnel Authority*

The Trans-Caledon Tunnel Authority (TCTA) is a state-owned entity with the mission to finance and implement bulk water infrastructure. It was created in 1986 to develop Lesotho Highland Water Project, a joint project between Lesotho and South Africa. As of 2012, TCTA has developed or is developing six other dam and bulk water supply projects throughout the country, including the Berg River dam.

TCTA sells bulk water to the government, represented by the Department of Water as the owner of the Water Boards that treat the water and sell it to municipalities and mines (Trans-Caledon Tunnel Authority, 2012).

2.6. REVIEW OF EVIDENCE ON EFFECTIVE WATER SERVICE DELIVERY

2.6.1. Experience of African countries

Utsev and Aho (2012) stress that in Nigeria, more than 90% of rural areas and 60% of urban areas face water related problems. The daily per capita consumption of water in Nigeria varies between 10 and 27 litres, with an average of 46 litres, which is far below the internationally recommended minimum requirement of 115 litres per person per day. Benue State is faced with serious water supply problem. Some studies have been carried out to assess the water supply situation in different parts of Benue State and examine the explanatory factors and implications on the people (Utsev and Aho, 2012). The common finding is that scarcity is a recurrent scene in Benue. The people of Mbativ district in Gboko Local Government Area of Benue State for example, face water supply shortages with cases of typhoid, cholera, bilharzias, dysentery and guinea-worm.

To address the problem of water supply the Benue State government established the Benue State Water Board, Benue State Rural Water Supply and Sanitation Agency (BERWASSA), Ministry of Water Resources and Environment, in addition to external

interventions from Water Aid, UK and UNICEF. According to the Department of Water Affairs (2001) there are about 40 million people living in Kenya, of which about 17 million (43 per cent) do not have access to clean water.

For decades, water scarcity has been a major issue in Kenya, caused mainly by years of recurrent droughts, poor management of water supply, contamination of the available water, and a sharp increase in water demand resulting from relatively high population growth. The lack of rainfall affects also the ability to acquire food and has led to eruptions of violence in Kenya.

In many areas, the shortage of water in Kenya has been amplified by the government's lack of investment in water, especially in rural areas. A study by Utsev and Aho (2012) content that effects of water shortages leads to waterborne diseases, drought, low crop yield, endangering of species, communal conflicts. In nearly all water shortage areas the threats of communal conflicts over water supplies is emerging as a serious issue.

For example, in 2008, there was an uprising in Oju, where the students of the college of Education Oju and the host community clashed over water scarcity where a student was killed during the crisis. While at the global level 1 billion people are locked out of having access to safe water due to poverty, inequality and government failure, it is also clear that not having access to clean water is a main driver of poverty and inequality. In Kenya, largely due to recurrent droughts, millions of families that rely on crops and livestock are threatened and thousands of people die each year as a result of thirst and hunger. In Kenya, the water crisis has severely affected millions of lives in many ways as contaminated water resources are extremely unhealthy and typically result in multiple illnesses.

There are three main categories that include different types of diseases related to unsafe water: Water-based: this category includes diseases such as malaria and

intestinal worm diseases (schistosomiasis). Water-borne: this category includes diseases such as typhoid fever, cholera, diarrhoea and dysentery. Water-washed: this category includes diseases such as eye infections and skin diseases.

2.6.2. Studies on South Africa on water service delivery

Molobela and Sinha (2012) stress that South Africa is a water scarce country due to its low average annual precipitation, and the unevenness of surface and groundwater distribution which is a result of climate and geography and only 8.6% of rainfall converts to useable runoff, the lowest proportion in the world. As water is the commodity of life, many lives are being threatened in South Africa. There are many challenges regarding water management in South Africa. This is mainly due to inadequate rainfall, hence mismanagement of water resources due to political breakdowns and racial groups also contribute to the problem. Some of the other challenges may include: Limited physical resources, a rapid growth population, and stagnant economies (Molobela and Sinha, 2012).

Complex challenges such as these, dictate a critical need to manage and conserve water resources properly. A lot still needs to be done in terms of implementation of new strategies to combat some of the challenges negatively affecting proper water resources management in South Africa (Molobela and Sinha, 2012). Malaria is one disease that is prevalent in South Africa and mostly in other parts of Africa i.e. in countries like Mozambique and Kenya. According to the Global Water Partnership (2000) Malaria (a water- based disease) is currently one of the most serious health problems in Kenya.

An estimated 26,000 children under five die every year from malaria and an estimated 3.5. Million children under the age of five are at risk of developing malaria. Malaria is contracted through areas of Kenya's western highlands and around the

coastal and lake regions where the malaria-carrying mosquito settles (Molobela and Sinha, 2012).

2.7.4 SUMMARY

The chapter presented a survey of the literature on how the shortage of water affects the lives of people, what some of the underlying causes of those shortages are and the evidence from other countries on the same problem. Country experiences are reviewed in order to understand the nature of water service delivery challenges they face. The chapter also examined some indicators that have been used in assessing water service delivery and sustainability of such delivery. These include ensuring continuous availability of sufficient water quantity and quality of water, within adequate institutional frameworks, applying sound management practices and appropriate technologies. What appears to be the consensus regarding water service delivery challenge is that it is a global problem and municipalities are faced with the common challenge of not being able to effectively provide water to their communities. The next chapter will describe the location of Hluvukani village in Bushbuckridge municipality, water service delivery in Bushbuckridge and the analytical techniques of the effect of water service delivery at Hluvukani.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

This chapter starts with a description of the study area with its population and followed by an overview of the research method employed. It also goes further and describes the location of Hluvukani village in Bushbuckridge Municipality, water service delivery in Bushbuckridge and analytical technique or approach used to analyse the questionnaires and interview guides for the variables that were considered to analyse the effect of water service delivery. The study further expands the purposes of descriptive analysis and discriminant analysis is presented subsequently. The categories for scoring are based on the interaction literature, specifically noting how water supply and service delivery interactions are conceptualized and measured within the existing quantitative research. Water supply and service conflict scales incorporate items that represent water supply overlapping into service delivery.

3.2. Study Area

The research was conducted in Mpumalanga Province, Bohlabela District in Hluvukani Village, Bushbuckridge Municipality. Hluvukani is a large village bordering on the Kruger National Park, some 600 kilometres from Johannesburg. The area is

densely populated and lies beyond Nelspruit and White River on the road that connects to Phalaborwa. The village has approximately 9,631 people. Most of the residents work on nearby farms. Some are unemployed. The villagers experience severe water shortage in the area.

Bushbuckridge Local Municipality is a presidential nodal point located in the south-eastern part of Limpopo Province and north-eastern part of Mpumalanga Province. The municipality is one of the two constituents of the former Bohlabela District Municipality (within Ba-Phalaborwa Local Municipality) further north, and Fetakgomo Local Municipality in the west.

The municipal area provides a link to Lydenburg/ Mashishing and other centres in the Lowveld, particularly Hoedspruit, Pilgrim's Rest and Graskop (Bushbuckridge Local Municipality IDP 2014/2015). The study of water services delivery in Hluvukani village in Bushbuckridge Local Municipality in Bohlabela district municipality in Mpumalanga Province was conducted in Hluvukani village. Hluvukani village occupies the eastern border of Bushbuckridge Local Municipality near the Kruger National Park. Bushbuckridge Local Municipality has a total population of 541 248 people (Bushbuckridge Local Municipality IDP 2016/2017).

The large part of the population consists of rural population between the ages of 15 and 65 years and is mainly dominated by women. Most of the men migrated to seek employment opportunities outside the province (Bushbuckridge IDP, 2014/15). Bushbuckridge Municipality has 37 wards. Ward 1 has the biggest population with 20778 dwellers and the smallest ward is ward 28 with a population of 9908. The total population of the municipality is 541.248. The Department of Water and Environmental Affairs' (DWEA) Drinking Water Quality Framework provides the basic requirements for clean drinking water (RSA, 1997). Safe drinking water which complies with the minimum drinking water specifications is crucial for the

maintenance of human health over a life time of consumption. If the residents are provided with clean drinking water; it will improve local livelihoods and safeguard the community from exposure to water diseases.

The sources of water are from two rivers. Groundwater is a very valuable source of water. Underground water, which is provided to the communities is not clean and puts the majority of household's under health risk. The poor quality of water provision and drying of underground water in some areas are insufficiently funded, to cover all dry areas as concern to the municipality. It is also relatively well served with basic infrastructure and includes the water treatment works which is the central element of the larger Rural Water Scheme, serving villages in Hluvukani.

3.3. Research methodology

Leedy and Omrod (2005) describe research methodology as the general approach the researcher takes in carrying out the research project. To some extent, these dictates the particular tools the researcher selects. There are basically two approaches to doing research: quantitative and qualitative. However, it should be noted that there is also a mixed methodological approach where the two approaches can be used in one study. Each research approach has evolved to fulfil specific research aims and functions, and specific methodological styles. Furthermore, it should also be noted that conventions have developed within each tradition. This study has adopted a qualitative method approach. Qualitative research focuses on understanding people's beliefs, experiences, attitudes, behaviour and interaction. This means that the qualitative method explores the experiences and beliefs of the participants. It is an approach used to answer questions about the complex nature of a phenomenon usually with the purpose of describing and understanding a phenomenon from the participants' point of view.

Creswell (2003) argues that a qualitative approach is one in which the inquirer often makes knowledge claims based primarily on constructivist perspectives (in other words, the multiple meanings of individuals experiences, meanings socially and constructed with an intent of developing a theory or patterns) or advocacy (participatory perspectives or change oriented) or both. The qualitative approach was used in order to understand the complex processes that precipitate human interaction, and it also provided the opportunity to obtain information that is relevant to the field of study (Mouton and Marais, 1990) Quantitative research explains the relationships between variables.

A case study approach was used because the researcher wanted to study in –depth the strategies used by government and municipal officials to address the challenges of water experienced by villagers at Hluvukani Village. In a case study, a particular individual, programme, or event is studied in depth for a defined period of time. Leedy and Ormrod (2005:137) stress that “A case study may be especially suitable for learning more about a little known or poorly understood situation. It may also be useful for investigating how an individual or programme changes over time, perhaps as a result of certain circumstances or interventions. The research methodology and design adopted are justified by the literature review. The constructions of the research instruments (questionnaire, interview schedule, checklist etc.) are justified. Statisticians’ inputs are included.

3.3.1. Research design

Bless and Higson-Smith (1995:46) provides the following definition of a research design: “The plan of how to proceed in determining the nature of the relationship between variables is called a research design”. The study followed a qualitative methodological approach through instrumental case study design by means of semi-structured interviews.

Maree (2007:70) argues that a research design is a plan or strategy which moves from the underlying philosophy to specifying the selection of respondents, the data gathering techniques to be used and the data analysis to be done. The choice of a research design is based on the researcher’s assumptions, research skills, and research practices, and influences the way in which she or he collects data.

There are two basic approaches to doing research: quantitative and qualitative. Each research approach has evolved to fulfil specific research aims and functions, and specific methodological styles and conventions have developed within each tradition. The qualitative research method was used in conducting this study because it is concerned with understanding rather than explaining, and natural observation rather than controlled measurement and views the subject exploration of reality from the perspective of an insider (Maree, 2007:100).

The study adopted both the qualitative and quantitative approaches for data collection and analysis. Qualitative measures provide information on how households feel about the situation, how things are done and how people respond to an intervention (Henn, et.al, 2006). The study further used the qualitative approach to describe the nature and types and status of water that rural households use in the village, the effectiveness strategies which adopted by the authorities in making water available to the community and also to describe the level and consistency of water supply to the village.

Creswell (2003:18) argues that a qualitative approach is one in which the inquirer often makes knowledge claims based primarily on constructivist perspectives (in other words, the multiple meanings of individuals experiences, meanings socially and constructed with an intent of developing a theory or patterns) or advocacy (participatory perspectives or change oriented) or both. In my study, I have inquired about the strategies government and municipal officials use to address water problems in rural areas.

3.3.2. Population of the study

The population of the study was made up of key informants, including Community Development Members or Leaders and Workers, Civic Members (groups), Forum Members of Hluvukani village were surveyed with the supplement of snowball sampling method, so as to have as many key informants as possible. The study used the primary data that was collected using a standardised questionnaire with questions that address water service delivery in Hluvukani village. The following data was used to analyse the proposed study respondents who are responsible for water services delivery in the area: the officials in Hluvukani village, the types and status of water service delivery available in the village, the effectiveness of the authority in making water available to the village and the challenges faced by the authority responsible for water supply in the village.

3.3.3. Sampling method

There are two major sampling strategies which are used in research. They are probability and non- probability sampling. Probability sampling strategies are based on the principles of randomness and probability theory, while non-probability methods are not. Probability samples satisfy the requirements for the use of probability theory to accurately generalize to the population, while this is not the case with non-probability samples (Maree, 2007). The present study used non-probability

sampling whereby a purposive sampling strategy was adopted. Macmillan and Schumacher (2001) argue that in purposive sampling, the researcher identifies participants based on their knowledge of the phenomenon under investigation.

In accordance with the qualitative approach, the study was conducted by applying non-probability sampling, combining both purposeful and simple random sampling in the selection of participants. The reason for applying the simple random sampling method was for every member of the population to stand as equal chance of being involved in the study.

Purposeful sampling was selected to enable the researcher to select few participants according to a list of specific criteria. According to Black (1999), purposeful sampling involves the researcher hand-picking the participants based on exact characteristics in order to develop a sample that is large enough yet possesses the required traits. The use of purposive sampling dully helped the researcher to interact with the participants. The participants in my study are villagers, municipal workers, Department of Water Affairs' officials and the headman.

The reason for using purposive sampling was that the researcher wanted to explore the views of the relevant participants (The residents of Hluvukani, the municipal workers, Department of Water Affairs' officials and the local Induna (headman). Their views assisted the researcher in responding to the question raised in the study. Maree (2007) stresses that this kind of sampling strategy is used in special situations where the sampling is done with a specific purpose in mind.

Maree (2007) stresses that sampling is a process of selecting a number of individuals representing a large population from which they were selected. Qualitative research is characterized by in-depth inquiry, immersion in a setting emphasis on context, concern with participants' perspectives and description of single settings. The purpose of sampling is to gain information about a large population. A total of 16 participants were selected. (5 Department of Water Affairs' officials, 5 municipal officials and 5 villagers and the municipal manager were selected). Since a qualitative approach was used, a small sample was selected.

Justification for use of small samples in qualitative research is presented in chapter 3.

Purposive selection is based on the knowledge of the subject. Thus, officials from the Department of Water Affairs were included because of their knowledge and expertise in water supply services and experience. Officials from the municipality were selected because of their knowledge of how the municipality works and how the priorities of the IDP are implemented. Finally, inclusion of the villagers is important because they are the recipients of the services.

The advantage of using sampling is that a researcher's collection of data using an informants group is less time consuming and less costly, and it is the only practical way to collect data when the population is extremely large. This decision was based on the calculation of the costs involved in the specific focus group.

Therefore, the sampling interval was between five to ten participants of Department of water officials (workers). Researcher knows that he or she is likely to get maximum information from extension officers who work with the water service delivery; and also from the community themselves may chose a mix in terms of gender, size and level of education of the services delivery. Within each household selected for the sample, the information was solicited from household's guardians, for example, those people who are daily responsible for providing water for domestic consumption.

3.3.4. Data collection method and analysis

Data was collected through the use of open ended questionnaires and interviews of village dwellers of the municipality. Textual secondary data was collected through literature review, desktop approach or study was employed. Primary or factual data was collected through a structured survey questionnaire and interviews. This was collected by facilitating questionnaires survey in the community of Hluvukani village

where households, municipal water workers and municipal councillors and officials provide information.

Qualitative data consists of narrative description which obtained in qualitative inquiry is detailed and rich, and include information about personal experiences, beliefs, perspectives, or situations of water service delivery in the village. Qualitative data provides a high level of information to assist in decision-making. Data from households or participant members was collected through an assisted questionnaire. The field worker assisted the respondents in answering the questions. This decision was made because of the high rate of illiteracy in the village. Interviews were conducted with key informants, including Community Development Workers, to allow an open process of probing.

3.4. SUMMARY

For the purpose of this study the local village of Hluvukani, under the jurisdiction of the Bushbuckridge Local Municipality, Bohlabela District of the Mpumalanga Province, was identified as a case study. The current state of water services delivery at Hluvukani has a negative impact on the health of the local residents. As a result of the inferior potable water supply service, local residents have no other choice but to drink contaminated water from the nearby rivers and other sources.

In this chapter, research methodology, specific procedure, research population, instrumentation, data collection were outlined and described. Quantitative data was collected by means of a survey design, from a sample implementing a standardised research instrument in the form of a questionnaire. Thereafter qualitative data was collected by means of instrumental case studies. The mixed methods approach is usually applied when a researcher tends to base knowledge on practical foundations. In order to understand research problems, the mixed methods approach utilises strategies of inquiry where data collection can either occur at the same time or in a sequence (Cresswell, 2003). For the purpose of this study the latter option applies.

CHAPTER FOUR: PRESENTATION OF FINDINGS AND INTERPRETATION

4.1. INTRODUCTION

In this chapter, the findings are presented followed by a presentation of the data analysed. The chapter starts with the presentation of biographic information of the participants. The results are presented in both graphic and tabular form. Data were analyzed by looking at the responses of each participant interviewed at Hluvukani. The interviewed participants were the municipal manager, Hluvukani villagers, officials from the Bushbuckridge Municipality and officials from the Department of Water Affairs.

4.2. Demographical Information

The initial section of the research instrument used to collect data was on the general information involving the biographical factors such as Gender, Age, Education, Occupation, Number of years in Hluvukani and other social factors of the respondents in Hluvukani.

4.2.1 Gender of the respondents

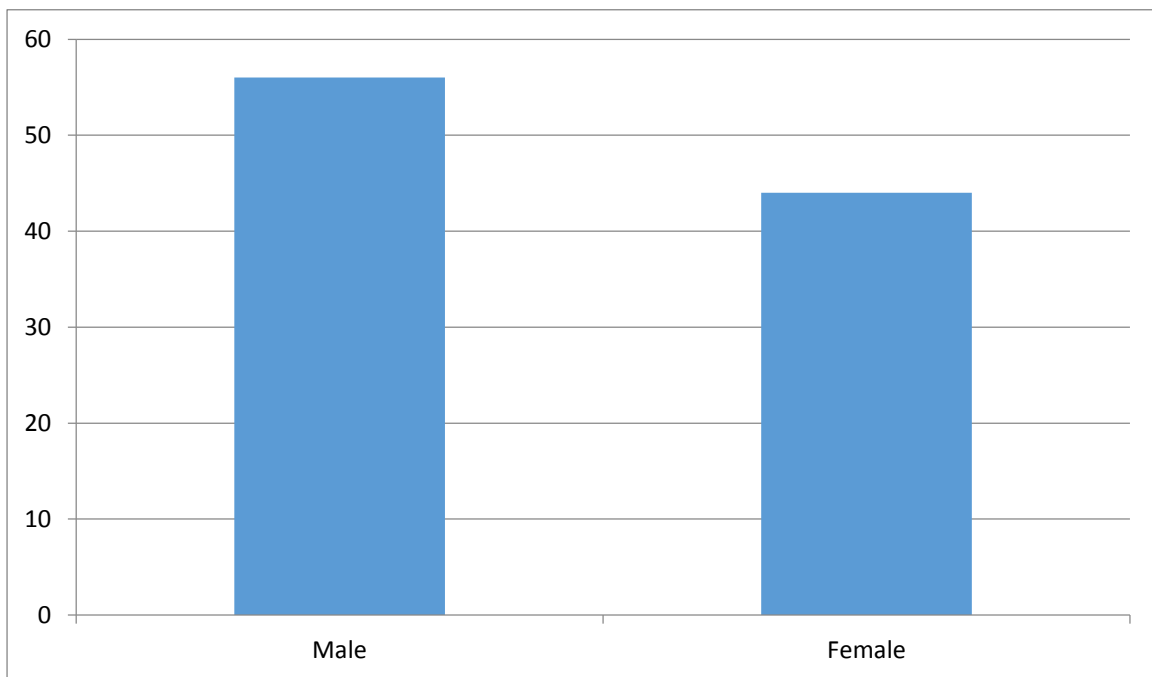


Figure 1: Gender of the respondents

The study saw a need to determine the gender of the respondents in order to enable the researcher to make demographic comparison concerning water service delivery in Hluvukani. Figure 1 above shows the gender of the respondents in Hluvukani. In a sample of 5 households, 4 respondents (80%) were male while the remaining 1 (20%) was female.

4.2.2 Age of the respondents

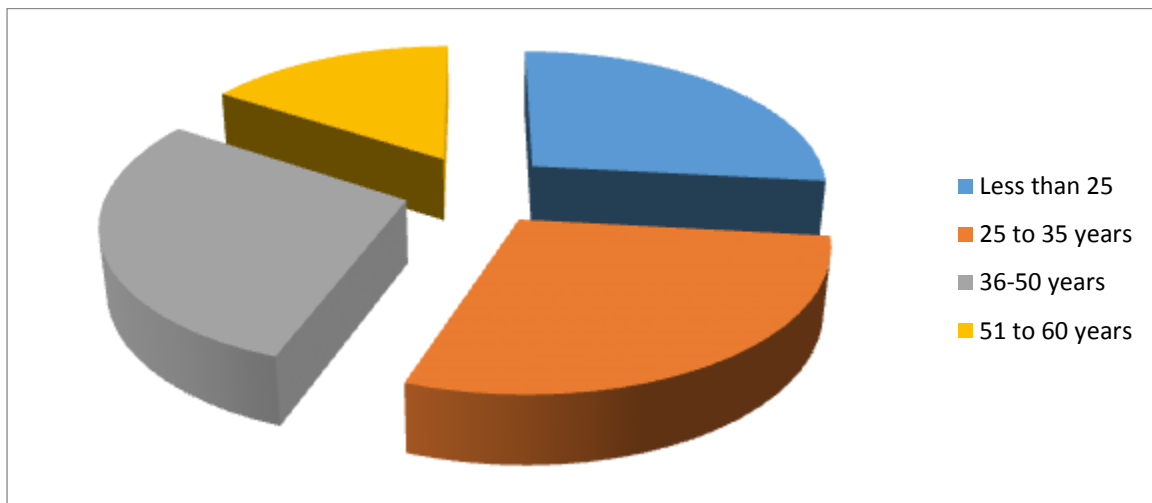


Figure 2: Age of the respondents

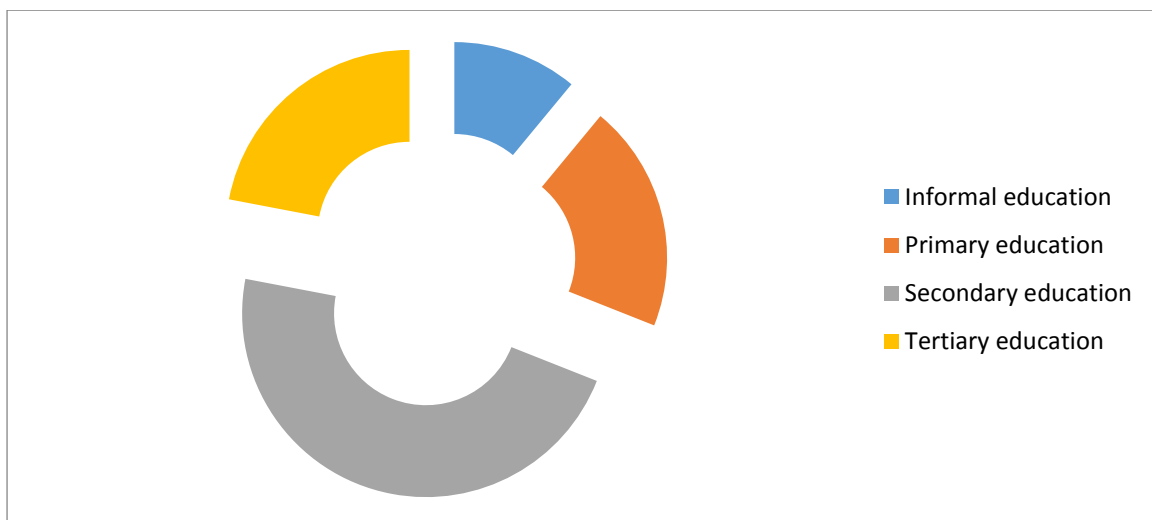
The study sampled different age groups in Hluvukani. This was mainly because these individuals are in a position to give a true picture of water services delivery. Figure 2 above shows the age of the respondents. Two (40%) of the respondents

are less than 25 years old, while two (40%) respondent is between 25 and 35 years. One (30%) of the respondents is between 36 and 50 years. The remaining (10%) are aged between 51 and 65 years.

4.2.3 Education of the respondents

It is important to determine the educational level of the respondents, in different categories such as respondents who do not have formal education, those with secondary educational, tertiary level and post-graduate qualifications. Figure 3 below shows the education level of the respondents.

In a sample of 5 respondents, 1 (20%) respondent did not go to school at all. Respondents with primary educational level 1 (20%) and a total of 2(40%) had secondary educational level. The last straw of 1(10%) obtained tertiary education.



4.2.4 Number of years living in the community

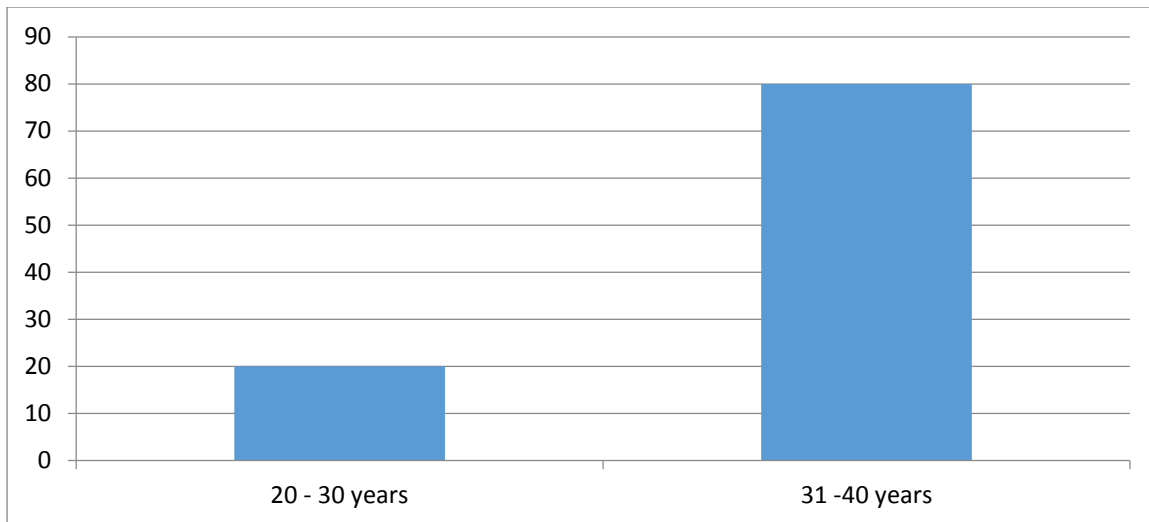


Figure 5: Number of years living in the community

The respondents have been living in Hluvukani for some time. The majority of the respondents 4 (80%) have been living in Hluvukani for 31 – 40 years while a small proportion of 1 (20%) has been living in Hluvukani for the past 20 – 30 years

4.2.6 Marital status of respondents

Table 1: Marital status of respondents

	Frequency	Percent	Valid Percent	Cumulative Percent
Single	1	20.0	20.0	100.0
Unmarried	1	20.0	20.0	100.0
Married	2	40.0	20.0	100.0
Divorced	1	20.0	20.0	100.0
Total	5	100.0	100.0	100.0

The Table above shows the marital status of the respondents. In the sample of 5 respondents, 1 (20%) was single. Two respondents (40%) were married while only 1(20%) was divorced and 1 (20%) was unmarried.

4.2.7 Full-time or permanent resident of Hluvukani

Some of the respondents live in the village as permanent residents and some are non-permanent. The majority of the respondents 4 (80%) were full-time residents, while 1 (20) % was non-permanent residents.

Table 2: Permanent and non-permanent residents

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	4	80.0	80.0	100.0
No	1	20.0	20.0	100.0
Total	5	100.0	100.0	100.0

Most of these community members have large family members ranging from 6-7 members in each household and constitute 44% of the respondents and 32% of the members in the households per family are between 3 and 5 members.

Only 24% of the households family members has the largest numbers of 8-12 members in a family, indicated by the belowed figure.

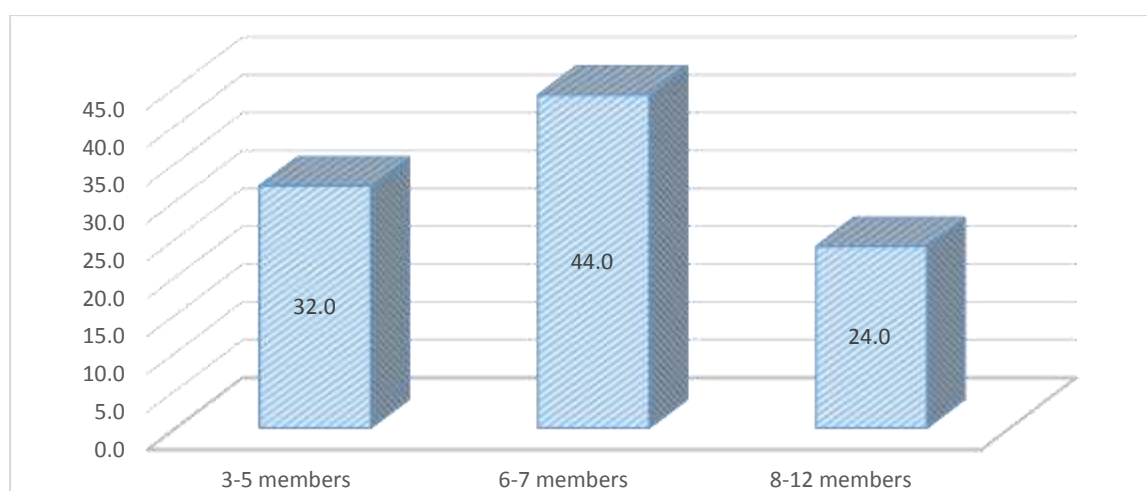


Figure 4: The number of respondents family members.

4.2.8 Source of water

There are many ways or sources in which the villagers can obtain water for drinking, cooking, washing etc, even though this water is unclean. These includes water from the river, boreholes, rainfall and pipelines from the neighbouring villages.

4.3 THEMATIC RESULTS

This study followed the qualitative method design. For the qualitative part a thematic approach was carried out to analyze gathered data. Three main themes under water service delivery were Delivery system, Strategies, Performance and Obstacles. These were identified with sub-themes under each one of these headings. A focus group was carried with relevant stakeholders for these themes to develop.

4.3.1 Delivery system

Not all municipal and department respondents gave ample indication of water delivery system at Hluvukani since their answers were more direct. However, the villagers had contrasting views. Careful analysis of the respondents' reflections yielded the following subthemes.

- **Effectiveness:** This subtheme indicates the effective way the municipality delivers water as a service to the community of Hluvukani. Most villagers' respondents mentioned that they did not see water service delivery as effective. While municipal and department of Water Affairs personnel thought water service delivery was effective. The delivery of water service was perceived ineffective by the villagers because the municipality took up to three weeks to deliver water to the people. Five out of 5 villagers interviewed indicated that the delivery of water service

at Hluvukani was not effective at all as the residents spent so many days without drinking water.

Based on the responses given by the villagers, water service delivery is a problem that has not yet been addressed properly. Effective service delivery means that villagers should be entitled to water service on a regular basis unlike what the municipality is doing in terms of supplying water to the villagers after a period of two weeks.

Villagers need water to survive. It is imperative that water is delivered on daily basis so that villagers may get water to cook, drink, clean and water their gardens. One of the villagers indicated that he has lost all his livestock due to the shortage of water at Hluvukani. The villager had three goats and five sheep. He attributed the loss of his live stock due to the shortage of water at Hluvukani. Another villager criticized the municipality for taking time to deliver water in their village.

He accused the municipality of sabotaging their progress. He stressed that his garden became dry since there was no water to water the garden. Based on what the villagers are saying and what I have observed at Hluvukani, the researcher cannot safely say there is effective water service delivery in the area. I also took the time to observe how the municipality was delivering water to the people. This was done through visiting Hluvukani area for ten consecutive days. I found that for five days, villagers did not receive water. The village headman also confirmed to me that this was a trend on the part of the municipality i.e. not to deliver water to the people on time. The municipal manager also agreed the delivery of water at Hluvukani was not done on a regular basis due to the shortage of transport. He stressed that the municipality was facing a massive problem regarding the delivery of water because most of their trucks were not in order.

For example, respondents “strongly disagreed and agreed” to the question, “Is water service delivery effective at Hluvukani? The municipal manager indicated: “Yes it is effective not we do not deliver water regularly but we make sure that people get water on a regular basis” while villager 1 says “No, not at all” and villager 2 says “It

is not effective” and villager 3 states that “It is not effective” and villager 5 also states that “No, it is not effective”. All the five municipal officials claim that “It is effective” whereas three officials from the Department of Water Affairs claim that “It is not effective” and the other one argues that he is not sure whilst the other one claims that “Yes, it is effective”.

From the above responses, it is clear that water service delivery at Hluvukani is not effective. The municipal manager might not be willing to reveal the truth because of fear of victimization. The municipal officials too might also not be telling the truth in order to protect their jobs. Villagers and officials from the Department of Water Affairs might be telling the truth because they have nothing to hide. In order to address water service delivery, there is a need for effective strategies.

- **Process:** This subtheme indicates the ability of Hluvukani Municipality water delivery processes of supplying water. Most respondents mentioned that water delivery process changes with times.
- Very few respondents, especially civil servants, said that the processes are not good for water delivery system. For example, community dwellers responded that systems vary from “bulk water supply, running pipes and trucks”.

As a researcher I found that the process of water delivery takes time. As I have indicated earlier, it takes the municipality more than three weeks to deliver water to Hluvukani villagers. The process is too slow such that villagers end up losing valuables such as livestock. Hluvukani as a rural village is dominated by farmers and the process of water service delivery is too slow such that farmers find it difficult to do well. The municipal officials concurred with the observation by the researcher i.e. that the process of water service delivery is slow and it needs to be addressed sooner rather than later. The supply of water is a cause for concern and it has to be improved in order for people to be supplied with water supply on a regular basis.

4.3.2 Delivery performance

- **Satisfactory:** This subtheme was more on where you stay and patterns of service water delivery. Like the first theme, community dwellers said the performance was poor while municipal servants opposed them. While in certain villages which are near Bushbuckridge town, mostly dwellers “agreed” to fairly fair performance. The municipal workers “disagreed” with poor performance. Villagers maintain that the delivery performance of the municipality in terms of water supply is not satisfactory hence the municipal manager and officials have different views. The former believe that the municipality has not delivered because the problem of water supply is worsening. However, the latter argue that the municipality is doing its best to ensure that people are supplied with fresh water.

The researcher made five trips to Hluvukani to observe how water is supplied in the area. I found that the process of water delivery in the area was too slow. Villagers had to travel long distances in order to get fresh water and some villagers depended on water from the fountains and wells. The officials from the Department of Water Affairs also alluded to the fact that water service delivery was not satisfactory at Hluvukani. One of the officials stressed that the municipality was doing its level best to deliver water. However, the delivery was not satisfactory.

- **Obstacles:** This sub-theme shows that Bushbuckridge Municipality is constrained in executing water service delivery efficiently. The municipality and the Department of Water Affairs, participants responded “strongly agreed” and “agreed”. Most of the obstacles were old infrastructure and “minimum budget to meet the water demand”. The villagers cited obstacles such as lack of commitment and nepotism as contributing factors for ineffective water service delivery. They stressed that the municipal manager “twisted” the water supply project that was meant for Hluvukani to his home village, an allegation that was denied by both the municipal manager and the municipal officials.

Lack of commitment was cited because the municipality did not have a budget for Hluvukani for 2016/2017 financial year even though the municipal manager claimed otherwise. This was discovered when Hluvukani villagers demanded to see the budget and it could not be produced. The municipality cited lack of money and capacity as obstacles for effective water service delivery in Hluvukani. The municipal manager concurred with the municipal officials that there was not enough manpower to deliver effective water service in all the areas under Bushbuckridge Municipality.

He further stressed that municipal officials did not have the capacity to deliver water effectively and they were 'waiting' for the national government to provide them with enough human resources and people who are capacitated and able to deliver water service effectively.

- **Strategies:** The municipal manager pointed out that "Yes, they are strategies because we deliver water every two weeks" whilst the villagers have different responses. Villager 1 was 'not sure' and villager 2 claimed that she 'does not think so' and villager 3, 4 and 5 said there were no strategies'. All the five municipal officials and officials from the Department of Water Affairs claimed that the strategies did exist. Hluvukani villagers indicated that there were no strategies for effective water service delivery because the only strategy that the municipality was using was to deliver water after two to three weeks. They indicated that there was no budget and no other method that was used by the municipality.

One of the participants indicated that the municipality was 'even' not delivering fresh and quality water and there was no way they could claim to have effective strategies for water delivery at Hluvukani. This was denied by the municipal manager and the municipal officials who claimed that the water that was delivered was fresh and healthy and there were strategies used to deliver water to Hluvukani villagers. Furthermore, the municipal manager claimed that with the limited budget they have, they are doing their level best to provide water to the people of Hluvukani and that they were also working hard to ensure that water was provided in order for people and animals to feed.

4.3.3 Dealing with constraint

- **Constraints:** The municipal manager argued that they “recruit the best personnel and also budget for water service delivery programmes” whilst the villagers claim that “they survive from water from wells”, “they survive by God’s mercy” and “they fetch water from other villages”. The municipal officials claim that there is a need for ‘a budget’ and a need for a ‘skills audit’. The same sentiments are shared by the officials from the Department of Water Affairs who claim that there is a need for “a budget’ and to get ‘more funds”.

In dealing with the constraints, the municipal manager argues that the problem of a shortage of funds and lack of personnel will be solved by recruiting the best personnel and also through budgeting. The issue of budget has also been raised by officials from the municipality and from the Department of Water Affairs. This might be true because in order to have effective water service delivery programmes, there is a need for funds to be available. Hluvukani villagers argued that the constraints that existed in water service delivery ranged from lack of commitment to nepotism. One of the villagers indicated that the municipal officials were not committed to solving the problem of water service delivery since they did not live in Hluvukani.

Another villager indicated that other nearby villages had enough supply and delivery of water by the municipality. She indicated that villages such as Clare, White City and Andover had enough fresh water and the supply there was satisfactory. This allegation was denied by the municipal manager and the municipal officials who argued that villages such as Clare and Andover also had the same problem Hluvukani had. They indicated that the mentioned villages depended on water that was delivered by the municipal trucks every two to three weeks. He also indicated that this was a trend in almost all the villages falling under Bushbuckridge Municipality.

4.3 SUMMARY

In this chapter, the data analysed gives a clear picture of water service delivery at Hluvukani. It indicates the strategies that municipal officials use to deal with water service delivery in the area and also the constraints they encounter and also how they deal with the constraints in order to deliver water effectively to Hluvukani and in other parts of Bushbuckridge. The chapter went further and presented the biographical information of the respondents who were involved in the study. The next chapter will present conclusion and recommendation from the open- ended questions.

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

5.1. INTRODUCTION

This chapter reviews the findings of the study and draws recommendations for future studies based on the results of the study. It goes further to suggest recommendations for policy implication in water service delivery in municipalities in South Africa with relevance of Hluvukani village. The chapter is presented in five sections. The summary of the study is drawn in section 5.1, while 5.2 presents the key findings of the study and section 5.4 presents the conclusion drawn from the key findings. The last section 5.5 presents the recommendations based on the findings of the study.

5.2. Summary of the study

Chapter one provided a brief background on the effectiveness of water service delivery. It went further and defined concepts used in the study as well as discussing the problem statement, the motivation, and the objective and then highlighted the research questions of the study. The aim of the study was to determine the effectiveness of Bushbuckridge Municipality water service delivery to communities. Chapter two reviewed water service delivery in communities; the need for effective water service delivery; Sustainability of water service delivery; factors that determine non-effectiveness in the delivery of water service; poor management of water supply and the effects of ineffective water service delivery. Chapter three reviewed both the quantitative and qualitative methodology used in the study to analyse the thematic analysis. Descriptive statistics were used to analyzed the demographic information of the study and the results were presented in chapter four.

This study applied the qualitative approach to answer the research questions presented in chapter one. Statistics and subthemes analysed different findings in relation to the effectiveness of municipal water service delivery in Hluvukani. Chapter five reported the findings of the analysis and the subthemes that were of ultimate significance to the effectiveness of water service delivery in Hluvukani.

5.3. Findings of the study

Chapter one highlighted the objectives of this paper and was analyzed using both qualitative and quantitative approaches. Statistics and each theme was analyzed under specific subthemes utilizing the primary data collected through a standard questionnaire and the results were highlighted in chapter four. The findings from this study do not differ from most of the previous empirical studies found in the literature. In South Africa limited studies have been carried out that analyzed the effectiveness of water service delivery. The study found mixed responses on water service delivery in Hluvukani community. Biographic information of the participants was used to analyze objectives of the study. The results are presented in both graphic and tabular form. Data were analyzed by looking at the responses of each participant interviewed at Hluvukani.

Is there a water service delivery problem at Hluvukani Village? The study found that there is water service delivery problem at Hluvukani. This is based on the responses given by Hluvukani residents, the municipal manager, municipal officials and officials from the department of water affairs. All the five Hluvukani residents indicated that there was a problem of water service delivery and they concurred the officials of department of water affairs, the municipal manager and officials from the municipality. How severe is the problem of water service delivery and what is the municipality doing to address the problem? The study found that the problem is too severe. Hluvukani residents indicated that they spent several days without water and as a result, this affected their livestock and also their way of living such as cleaning, cooking, bathing and watering their plants and flowers.

The municipal manager also stressed that the problem was too severe because the residents felt that they were neglected and the villagers had made several concerns with the municipality and the department of water affairs regarding the problem of water service delivery problem at Hluvukani. What is the impact of poor water service delivery on Hluvukani residents? The study also found that there is a negative impact of water service delivery on the residents of Hluvukani. They indicated that they did not get water for days and weeks and as a result, they did not feed their livestock and they did not water their gardens effectively. They also did not have water to drink, cook and clean and as a result, some of their children ended up catching up opportunistic diseases caused by dirtiness.

The study also found that the municipal manager concurred with Hluvukani residents by indicating that villagers were suffering because of the impact of poor water service delivery at Hluvukani. The municipal officials and officials from the department of water affairs also indicated that poor water service delivery had a negative impact on the lives of the villagers. What is the permanent solution on the problem of poor water service delivery at Hluvukani village? The researcher found that there was no permanent solution to the problem of poor water service delivery at Hluvukani. This was evident when the municipal manager indicated that they only relied on trucks to supply the residents with water every two weeks.

The municipal officials concurred with the municipal manager that they did not have a permanent solution because of budget constraints and they only had a temporary solution which was to deliver water by trucks every two weeks so that residents and their livestock can survive. The officials from the department of water affairs also concurred with their municipal counterparts that there was no permanent solution regarding the supply of water at Hluvukani. They indicated that there was no budget in the department of water affairs to supply water at Hluvukani.

The residents of Hluvukani also stated the fact that there was no permanent solution to this problem at the present moment. They stressed that they only relied on water supplied by trucks from the municipality and some i.e. those who afford relied on water from boreholes and wells. The supply of water by trucks was perceived as ineffective by the residents, municipal officials, the municipal manager and the officials from the department of water affairs. Dollery and Wallis (2001) argued that effectiveness has been often used to assess the overall performance of service delivery by an organization. Effectiveness is the extent to which a system achieves its programme and policy objective. The study went further and showed that effectiveness encompasses a number of different desired aspects of service linked to programme outcomes objectives.

The ineffectiveness of water service delivery at Hluvukani is a cause for concern because water is life. People struggle to survive and they find it difficult to live without water. According to the National Water Resource Strategy for South Africa (2002) water gives life. It waters the fields of farmers, it waters the crops and stock of rural communities and it provides plants and animals that make up our natural heritage. In order for people to live healthy lives they need water. Reliable, safe drinking water, water for sanitation and hygiene and water for growing crops is critical to alleviating poverty in South Africa.

Rural development and urban renewal both depend on water to achieve their goals (National Water Resource Strategy for South Africa 2002). The government is charged with the responsibility of supplying clean water to communities. There is a need to ensure that there is water in rural and urban areas. Villagers claim that the delivery system is not effective and they cited an example of the municipality taking up to three weeks to deliver water at Hluvukani. They indicated that the system was not only ineffective but frustrating as well and there was a need to improve the delivery system in order to ensure that there is effective supply and delivery of water at in the area.

The municipal manager and the officials attributed the slow and ineffective delivery due to lack of manpower which they blame on the budget allocated to them by the Department of Local Government and Traditional Affairs. They argued that the budget was too small to cover the delivery of water not only at Hluvukani but Bushbuckridge as a whole.

Theme 2: Delivery performance was divided into three subtheme i.e. satisfactory, obstacles and strategies. The delivery performance was more significant to community dwellers since this theme affected water service delivery. The satisfactory subtheme was more on the pattern of water service delivery. It is worthwhile to note that this subtheme had mixed answers between municipal servants and community dwellers. The second subtheme, obstacles focused on the capacity and equipment of Bushbuckridge Municipality. The performance of the municipality according to the villagers is not satisfactory at all. Hluvukani villagers argue that the municipality has done little to improve their lives and this was found to be true by the researcher after observing how the municipality was delivering water in the area. As indicated earlier, the researcher found that the municipality spent up to three weeks without delivering water at Hluvukani. This clearly shows that the performance is weak and not satisfactory and the villagers are suffering because of the municipality's ineffective delivery of water.

They have lost quite a number of their livestock and they are also suffering because there is no water for watering their gardens and fields. There is an urgent need for effective water service delivery plan and according to Bushbuckridge Local Municipality –IDP (2012/13) a strategy is in place to provide water to the communities. Strategy A is the provision of portable water by the municipality through bulk supply, reticulation, purification and storage infrastructure. Bushbuckridge is a water scarce area with only Inyaka dam as the main source of water.

It has at least 70% of the communities without bulk water supply and almost 60% without tapped water and at least 75% without yard water connection. The majority of the communities (an average of 70% of the population) still rely on water from the boreholes for water that may be contaminated due to back yard burials and pit toilets in the rural areas. Municipality and departmental officials sighted old infrastructures and minimum budgets as obstacles. Sub-theme three strategies, the municipal manager argued 'Yes, they are strategies because we deliver water every two weeks.' The villagers have different responses, however. The performance of the municipality is also measured by what the municipality has achieved. Based on what I have found at Hluvukani, one can say that there is a challenge of water service deliver at Hluvukani. People are still sharing water with animals. They depend on water from wells and fountains.

The researcher has also found that people depend on water from nearby villagers and from people who own boreholes. Those with boreholes are making money by taking advantage of the situation at Hluvukani. A 25l bucket costs R5 and this means that people who have no money cannot afford to buy water from those who own boreholes and as a result they end up depending on water from wells. Because of poor water conditions and lack of fresh water, Hluvukani residents end up suffering from diseases such as Kwashiorkor and Cholera. These diseases are attributed to lack of fresh water caused by the shortage of water and lack of effective water service delivery at Hluvukani.

Indeed water is important in people's lives. People need water to do their washing, to clean their water, to water their gardens, etc. It is therefore imperative to ensure that people have water in order to lead healthy lives. Utsev & Aho (2012) argue that water is also a key component in determining the quality of our lives. Today, people are concerned about the quality of the water they drink. Access to safe drinking water has improved steadily and substantially over the last decade in almost every part of the world.

These sub-themes were analysed to answer research question two and three. Theme 3: dealing with constraints had one subtheme i.e. constraints. The municipal manager argued that they 'recruit the best personnel and also budget for water service delivery programmes' whilst the villagers claim that 'they survive from water from wells', 'they survive by God's mercy' and 'they fetch water from other villages'. This theme answered the last research question. The researcher has also found that the municipality is not under-staffed. There are so many workers in the municipality. There are technicians, engineers, field workers and people who are very skilful: so the question of lack of human resources as argued by the municipal manager seems to be not accurate. One has also found that the personnel is ready to work and uplift communities but the problem is the budget because the IDP for 2016/2017 does not indicate or include Hluvukani water service delivery. This clearly shows and means that the people of Hluvukani will still go for a long period without water.

5.4. Conclusion

The primary objective of the study was analysed using mixed methods. The study answered four research questions pertaining to the effectiveness of water service delivery in the Hluvukani community in Bushbuckridge. The first research question was: What constitutes water delivery system? The second was: What strategies are being implemented? And the third being, how are the strategies working? The fourth and last question was: What are the obstacles to delivery? Biographical data analysis and the thematic approach were used to analyse and answer these four questions. The first question was answered with many respondents disagreeing with the system used for water service delivery. Like the first question, number two was also answered negatively by rural dwellers and positively by civil servants. The third question focused on strategies in effective water service delivery.

To answer such a question respondents showed negative responses to all subthemes and never felt confident that things might change in the long run. The last question focused on obstacles. To answer these questions the respondents from civil servants showed infrastructure and minimum budget as obstacles. There is ineffective water service delivery at Hluvukani. There are ineffective strategies that are used by the municipality to address water service delivery in the area, such as, the delivery of water by trucks every two weeks. There are constraints in dealing with water service delivery at Hluvukani.

There are effective ways, however, of dealing with the constraints such as budgeting and training personnel on how to run water delivery projects. From the summary, one may conclude that there is no effective water service delivery at Hluvukani as the villagers wait up to two weeks to get water from the municipality. They buy water from those who have boreholes, share water from the wells with wild and domestic animals and they travel long distances in order to get water from other villages. One may also conclude that the strategy of delivering water by municipal trucks every two weeks is ineffective.

Villagers and their animals need water on a daily basis. Villagers need water to drink, wash, cook, clean and water their gardens. Due to ineffective water service delivery, children go to school without having bathed and their uniforms are always in tatters due to lack of water. There are constraints in dealing with water service delivery. The constraints are lack of proper budgeting, lack of skilful personnel and also lack of funds. As a result, the municipality finds it difficult to deliver water in the area. However, there are ways of dealing with the constraints and they include budgeting, training personnel on how to run water projects and educating the villagers on the effective use of water.

5.5. Recommendations

In the light of the above mentioned conclusions, this study makes the following recommendations:

- The water service delivery problem at Hluvukani should be addressed by relevant stakeholders in the municipality. This means that the municipality should redouble its efforts to deliver water in the area.
- The strategies used to deal with water service delivery should be revisited in order to ensure that they are effective and that they yield the desired results. The municipality should have a budget for water service delivery at Hluvukani. It should also hire quality technicians and engineers to ensure that the process of water service delivery in the area is sustainable.
- The municipality should provide boreholes for Hluvukani villagers. Boreholes will enable the villagers to have fresh and quality water instead of depending on water from wells and fountains.
- A long term water service delivery project should be started. In some areas falling under Bushbuckridge such as Thulamahashe and Dwarsloop, there are water service delivery projects and residents enjoy fresh drinking water as compared to their Hluvukani counter-parts.
- Villagers should be educated on the use of water. The municipal manager has alluded to the fact that villagers in most of the areas do not use water wisely

and as a result, there is a problem of water shortage. People also use water carelessly for example, -for washing their vehicles and watering their gardens.

- Villagers should be provided with water on a daily basis. Water is life and it is not possible to live healthy lives without fresh and quality water. This means that there is a need for villagers of Hluvukani to get water for their basic needs.
- The municipality should budget for the water service delivery project at Hluvukani. There is a need for a budget that will cater for the water service delivery problem at Hluvukani. This means that the municipality should ensure that there is money available for the water service delivery project in the area.

In order to address the problem of water service delivery at Hluvukani, it is imperative that the municipality works tirelessly by ensuring that money is available to fund the project on water service delivery in the village. This will ensure that the problem of water service delivery is attended to.

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APPENDICES

APPENDIX A: QUESTIONNAIRE FOR THE MUNICIPAL MANAGER/ MUNICIPAL OFFICIALS AND OFFICIALS FROM DEPARTMENT OF WATER AFFAIRS

1. Is there a water service delivery problem at Hluvukani Village?

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2. How severe is the problem and what are you doing as the municipality to address it?

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3. What is the impact of poor water service delivery on Hluvukani villagers?

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4. What obstacles are there in delivering water effectively at Hluvukani?

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APPENDIX B: QUESTIONNAIRE FOR HLUVUKANI VILLAGERS

1. For how long have you been staying at Hluvukani?

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2. Is there a water service delivery problem at Hluvukani?

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3. How severe is the problem of water service delivery at Hluvukani?

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4. How do you cope without water?

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5. What is the municipality doing to address water service delivery problem at Hluvukani?

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6. What have you done to show your unhappiness about the problem?

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APPENDIX C: INTERVIEW GUIDE: MUNICIPAL MANAGER

1. For how long have you been a municipal manager here?
2. Have you tried to address the problem before?
3. What challenges are you facing in addressing the problem?
4. Is there a budget for the lack of water service delivery?
5. Is the National government aware of the problem?
6. As a short-term measure what are you doing to address the problem?
7. What is the long-term plan?
8. When will that take place?

APPENDIX D: INTERVIEW GUIDE: HLUVUKANI VILLAGERS.

1. Is there a water service delivery problem here at Hluvukani?
2. For how long?
3. How do you survive?
4. Is the municipality addressing the water service delivery problem?
5. How should the municipality supply water?
6. What was the response of the municipality?
7. What is the municipality doing now to address the problem?
8. Do you cope with that arrangement?
9. What should be done to address the problem?

APPENDIX E: INTERVIEW GUIDE: DEPARTMENT OF WATER AFFAIRS OFFICIAL

1. Is there a problem of water service delivery at Hluvukani?
2. How big is the problem?
3. What is your Department doing to address the problem?
4. How?
5. Is that the solution?
6. Then what is the permanent one?
7. When will the project kick start?
8. Are you satisfied with how you are delivering water service to the people of Hluvukani?
9. Let's hope you will speed up the process of delivering water to the people.

APPENDIX F: INTERVIEW GUIDE: THE MUNICIPAL WORKER

1. Are you addressing the problem of water service delivery at Hluvukani?
2. How are you addressing it?
3. What is the municipality doing to address the problem?
4. Is that enough? Do you think people can survive?
5. Then what are your permanent plans about that?
6. Do you think the municipality is doing enough to address the problem?
7. Why do you think so?
8. What plans?
9. When?

APPENDIX G: REQUEST FOR PERMISSION (REGIONAL MANAGER)

**APPENDIX H: PERMISSION TO CONDUCT RESEARCH (MNISI TRIBAL
AUTHORITY)**

APPENDIX I: RESPONSE FROM THE REGIONAL MANAGER

APPENDIX J: RESPONSE FROM MNISI TRIBAL AUTHORITY

APPENDIX K: CONSENT FORM FOR PARTICIPANTS