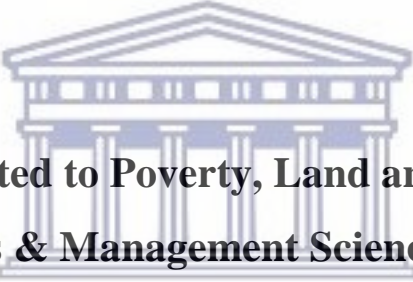


**ROLE OF WATER AS A RESOURCE IN HYGIENE AND SANITATION**

**BY**

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**A Full-Thesis submitted to Poverty, Land and Agrarian Studies,  
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of Philosophy Degree**

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## ABSTRACT

Water supply and sanitation remain a huge problem in townships and rural areas of South Africa, in effect affecting the water supply, hygiene and health of marginalized communities. Following democracy in 1994, South Africa's new government embarked on a program of eradicating backlogs in water supply and sanitation that had become endemic under apartheid in townships and rural areas. In addition, South Africa's constitution categorically states that every citizen has a right to a minimum of basic water supply and sanitation. Internationally, access to basic water supply and sanitation are fundamental human rights. Thus the South African government aims is to ensure that all South Africans have access to basic water and sanitation services. This study investigated the quantity and quality of water and how these effect sanitation and hygiene of communities using Walmer Township in the Nelson Mandela Bay Municipality as a case study. The study used a multi-pronged methodological approach including structured interviews with a sample of households, key informant interviews, focus group discussions, observations and secondary information.

Although the Walmer Community felt that they had access to sufficient quantity of water for their daily use and that the quality of the water was fine, the reality was that most households use less than the daily minimum amount of water per person as required in the constitution because of the distance where they have to fetch the water, which is too far to collect more water than they absolutely need. There is need for municipality to provide more stand pipes in order to reduce the distance that most households have to walk to fetch water.

80% of Walmer residents still use the bucket system, which is the issue that the community is more aggrieved about. One of the reasons the bucket system persists is the unplanned development of the Township and the type of dwellings (mostly shacks) that people still use. Also, the Township has grown and mushroomed organically as a result of the constant influx of people looking for better economic opportunities from rural areas or other urban areas. This makes it very difficult for the municipality to plan for and provide services and infrastructure as the Municipality is always playing catch-up. Worse still, the average number of people that use each bucket toilet (over 80) makes it extremely difficult to maintain the toilets clean and in functional and usable state at all times. Another problem is that the buckets, in particular those managed by the municipality, are not collected as scheduled resulting in spill-over of the toilets. Most of all, there are currently no clear arrangements

around management and maintenance of the bucket toilets. Therefore the impact that the bucket system has on the residents' health and hygiene, and the general Township environment is dire.

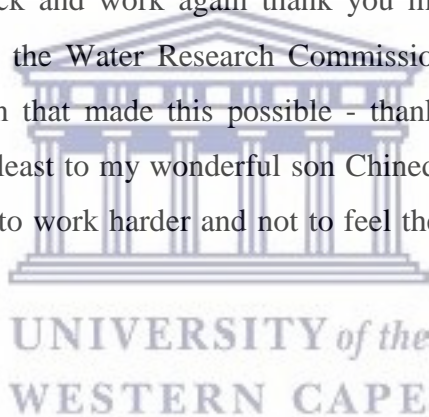
The uncontrolled and continuing influx of people into Walmer Township has led to very high population density, with the average number of people per household up to ten. Most people of working age in these households are unemployed, which means that most households in the Township depend on social grants for survival. The high unemployment rate and dependency on social grants by most households in Walmer Township means that the community cannot afford to pay for services and therefore depend on amenities provided by the Municipality.

The majority of the population of Walmer Township depends on basic services provided by the Municipality. These are provided as public amenities available to all Walmer residents, which makes them largely 'open access'. This has resulted in poor management and poor maintenance of these amenities. The unhygienic state of most of the bucket toilets and the poor state of water stand taps is as a result of this current management arrangement. It would improve management of these public amenities if a system of locating stand taps and bucket toilets to specific households that could limit access and use to these defined groups of households was introduced. These households would then be responsible for maintaining and managing use of the specific and allocated amenities. The current management arrangements for these public amenities point to the fact that there is currently lack of participatory planning and management between the Municipality and the community. The Municipality takes top-down decisions resulting in disjuncture between the Municipality and the Community in terms of real community needs, provision of these needs, and how they should be serviced and managed.

**Key words:** Water supply, Sanitation and hygiene, service delivery, management and governance of services, Walmer Township, South Africa

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## ACRONYMS

|        |  |
|--------|--|
| NMBMM  | Nelson Mandela Bay Metropolitan Municipality |
| LGBER  | Local Government Budget Expenditure Report   |
| IDP    | Integrated Development Plan                  |
| WSDP   | Water Service Development Plan               |
| SMP    | Sanitation Master Plan                       |
| FBWP   | Free Basic Water Policy                      |
| MDG    | Millennium Development Goals                 |
| DWAF   | Department of Water Affairs and Forestry     |
| ARI's  | Acute Respiratory Infections                 |
| LGTS   | Local Government Turnaround Strategies       |
| WWTW   | Waste Water Treatment Works                  |
| BEP    | Bucket Eradicating Programme                 |
| LOFLOS | Low Flow Onsite Sanitation                   |



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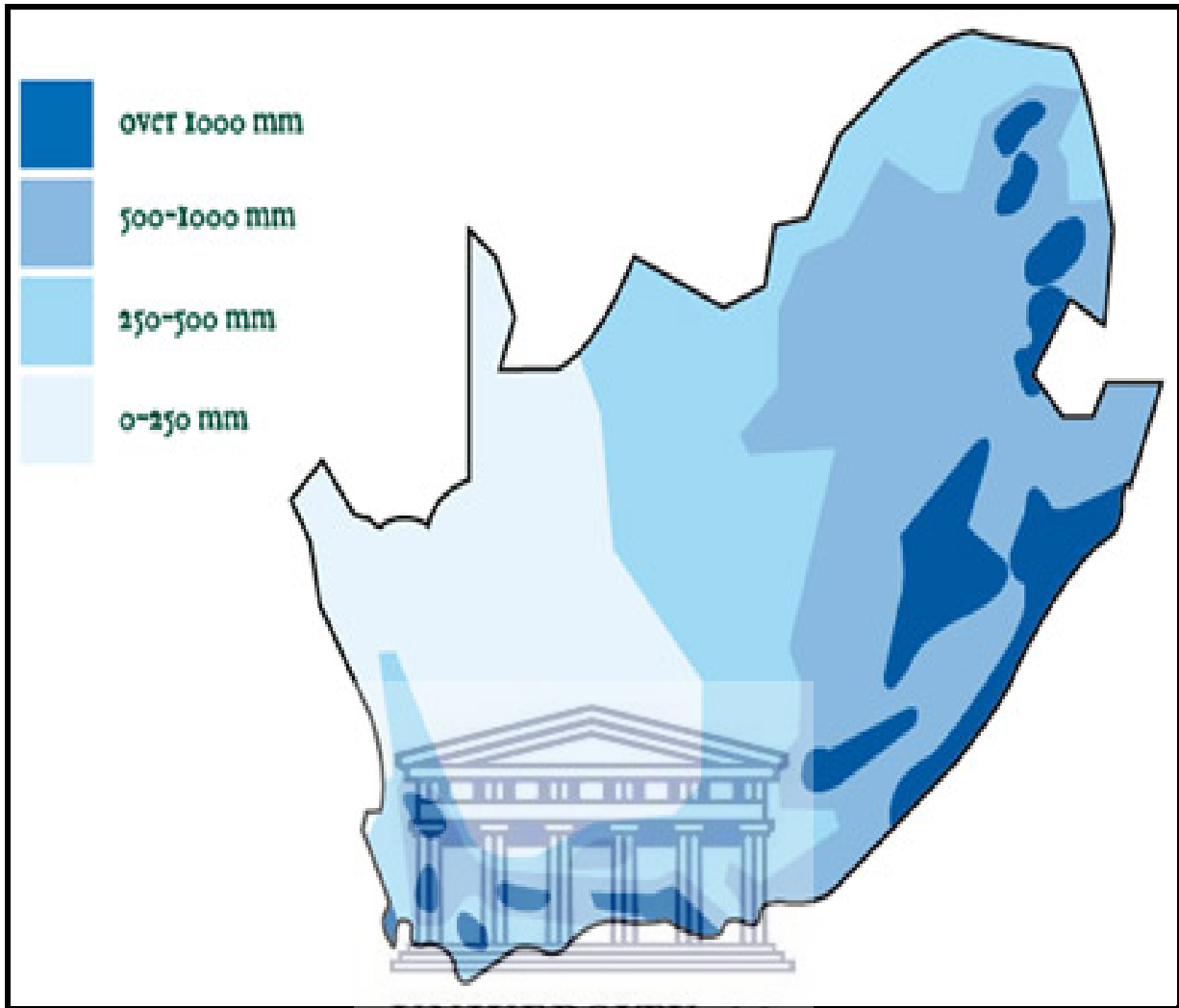
UNIVERSITY of the  
WESTERN CAPE

# 1. CHAPTER ONE: ROLE OF WATER AS A RESOURCE FOR HYGIENE AND SANITATION

## 1.1.Introduction

Water is a finite global resource and is a basic requisite for the human body. There are millions of people in the world who do not have access to safe drinking water. There are some who have water but they are unable to use it. The availability of freshwater to human health is crucial in several ways. 70% of the earth surface is covered with water but only 3% of that water is freshwater safe for human consumption ([https://www.eurekalert.org/pub\\_releases/2015-08/uosf-wc7082415.php](https://www.eurekalert.org/pub_releases/2015-08/uosf-wc7082415.php)). Water consumption increases in hot areas. According to Falkenmark et al., (2007) water scarcity is viewed as lack of water in relation to water requirements. Falkenmark gives two different types of water, which are green and blue water. The blue water is the water that moves on and under the surface. On top of the surface it is in the form of run off which eventually goes to rivers, rills etc. The underground one, which goes through the infiltration, recharges the water table and the aquifers. Green water is the one that evaporates into the atmosphere and goes through the process of transpiration from plants. The blue water is the one that is used by human and is becoming scarce due to high competition and over use of the resource including due to population growth.

Fresh or clean drinking water is very scarce and millions of people around the world spend time searching for it. Sadly people who have the luxury of having access to improved drinking water misuse it. Water scarcity involves a lot of things like water crisis, water shortage or water stress and it can be because of physical and economic water scarcity. Hunter et al., (2010) says that the physical aspect of water scarcity refers to the situation where natural water resource is incapable of meeting the demands of an area or region. On the other hand, the economic side of water scarcity refers to the poor management of the resource by humans. In Sub Saharan Africa where South Africa is economic scarcity that is common. Most townships and informal settlements in South Africa experience both of these types of scarcities as the population in these areas is usually high and as such the demand for is high



**Figure 1:** Rainfall pattern in SA (Source: Water wise SA)

The above figure shows the uneven distribution of rainfall in South Africa; the Eastern side of the country is wetter than the Western and the interior side. This shows that the Eastern side of the country receives more rainfall than the rest of the country. The study area - Nelson Mandela Bay Municipality (NMBM) - is located in the eastern side of the country, which means rainfall is not scarce, and is much wetter and the availability of water supply is expected to be adequate all times.

**1.2. Importance of Water**

Water is the elixir of life and fundamental for all human beings on planet earth as well as the ecosystem. Water is connected to availability of food. Falkenmark & Rockstrom (2005) outlined that 800 million people in the world suffer from malnutrition and amid these are 200 million children under the age of five years. In developing countries 1.1 billion people still

lack organized water supply to their households (ibid.). Mark Twain's quote states '*Whisky is for drinking; water is for fighting over*' shows it is an important resource. In line with Twain's thoughts, water shortage has contributed to conflicts in some regions across the globe as people fight for water control for example in some African regions (Sudan and Kenya). Water is the most important of all natural resources in the world as without it life cannot be possible to all species. Making sure that everyone has access to safe water supply can reduce the spread of diseases such as cholera. Access to basic water supply and safe drinking water is a fundamental human right and is linked to people's health (Hodgson, S. & Manus, L., 2006). Better access to safe drinking water can have a positive effect to public health.

Governments have also paid attention to the importance of water. According to the Water and Sanitation Programme (2001), South African government embarked on a program to eradicate backlogs in water supply and sanitation, underpinned by development of sound sectorial policy and legislation following transition to a full democracy in 1994. The natural variability in the rainfall coupled with high rates of evapotranspiration have placed the gathering, storage and also reticulation of water on high planning agenda from colonial times till present (Earle et al., 2005). The industrialization, urbanization as well as population growth demands for water services have put pressure on the ability of the natural system to provide sufficient quality and quantity of water. The need to extend water services to all has come into conflict with cost recovery principles. Water is also linked to diseases. Weiss (2015) pointed out that in developing countries four fifths of all illness are caused by water borne diseases and that diarrhea was the leading cause of death among children.

According to the Local Government Budget Expenditure Report (LGBER) (2011) South Africa has a number of challenges in relation to water at a level of resource and the actual provision of water services by municipalities. The government's aim is to ensure that all South Africans have access to basic water and sanitation services. By basic water supply means that the supply of 25L of portable or clean water per person per day from a source that is within 200m of the household. Basic sanitation refers to the provision of sanitation facilities that are accessible to a household; this includes the safe removal of human waste and waste water from premises where appropriate and necessary.

The Nelson Mandela Bay Metropolitan Municipality (NMBMM) where Walmer Township is located acknowledges the many service delivery challenges it continues to face. Against this

backdrop, it developed a number of plans to address these challenges (Integrated Development Plan (IDP), 2006). As a result, all South African water services authorities were obligated to prepare a Water Service Development Plan (WSDP). WSDP is a business plan setting out the way in which a specific Water Services Authority delivers water services to individuals and businesses in its area of jurisdiction. The NMBMM plan aimed to ensure that the Municipality delivers sustainable water services to the people. The following are some of the challenges outlined in the IDP (2006):

- a) Provision of basic water to all;
- b) High non-revenue water (unaccounted for water);
- c) Timeous provision of infrastructure to meet developmental growth needs;
- d) Maintenance of infrastructure to ensure continued operation;
- e) Limited financial and human resources; and
- f) Acute drought.

The Walmer Township is one of the major townships in NMBM and effective and efficient service delivery to the residents is a responsibility of the local government. The NMBM has a water service authority which is responsible for the provision of water services within its area of jurisdiction (IDP, 2015). There are various stakeholders that are responsible for providing water; such as water boards which are Gamtoos Irrigation Water Board and Sundays River Irrigation Board. Another system is the Western system, which also provides water to the metro from Churchill Dam and Mpofu Dam on the Kromme River near Humansdorp. Churchill Dam is owned by the metro.

Lee (2013) point out that about 22 500 buckets are provided and serviced twice a week to informal households which do not have access to basic level of sanitation, and a draft Sanitation Master Plan (SMP) has been developed to meet the long-term needs of NMBM. Most of these bucket systems are in Walmer Township. However, the Walmer community has continued to complain to the municipality about the issue of bucket system. The Metro has sufficient water supply but it has found it difficult to provide for the Walmer community.

In 2001 a Free Basic Water Policy (FBWP) was introduced and its aim was to make sure that people have access to basic water supply by means of subsidizing the current operating and maintenance of current basic water supply. The policy showed some gaps which lead to policy review to ensure that the aim of supplying water to South African citizens is

accomplished (Muller, 2008:72). The South African government has the responsibility to give assurance that everyone has physical access to water supply (Earl et al., 2005:14). The authors further state that the facilities that ensure access to water should be located in areas that are physically safe for all sections of the population more especially the vulnerable and marginalized groups (Earl et al., 2005:14). The implication is that people should be able to access water without necessarily sacrificing access to other basic services, thus it is important to guarantee that the cost of water access is protected. There are two different schools of thoughts, which resulted from water demand management, the first perceives water as an economic good, which has to be priced so that it is used appropriately and not wasted. The second one perceives water as a human right and argues that everyone has right to water at no cost. The tariff introduction system has been shown to have a negative impact on poor households and the major reason is that households in poor areas pay more for water services compared to households who live in high income areas (Dugard, 2008:4). The inability of the poor households to pay tariffs has resulted in municipalities disconnecting the much-needed services.

Decent housing is a human right in maintaining sustainable life. Housing is “*the first need of vulnerable populations following natural and man-made Disasters*”, argue Kissick and others (Kissick et al., 2006:2). Having a house does not just provide shelter but rather it helps in establishing a good foundation for sustainable livelihoods. This includes jobs, economic and social rights; as well as the access to services such as water and sanitation as well as education. In a nut shell housing helps in creating a better standard of living. According to the October Household Survey (OHS) 1999; approximately 75% of the non - poor had access to electricity compared to the 27% of the poor, 73% of the non- poor had access to adequate sanitation i.e. flushing toilets compared to the 38% of the poor and also 77% of the non- poor had piped water compared to 47% of the poor

There are various ways in which the poor in the society can be defined. Mead (1994) mentioned that the poor are not able to save money for the future and will spend their money on items that they feel are necessary for their current well-being such as entertainment, food, clothes, etc. Poor can also refer to people that live in poverty as postulated by Jordan (1996) that poverty refers to being without adequate household or personal income or resources to sustain a livelihood or purchase items needed to maintain the basic quality of life..

### 1.3. Description of Walmer Township

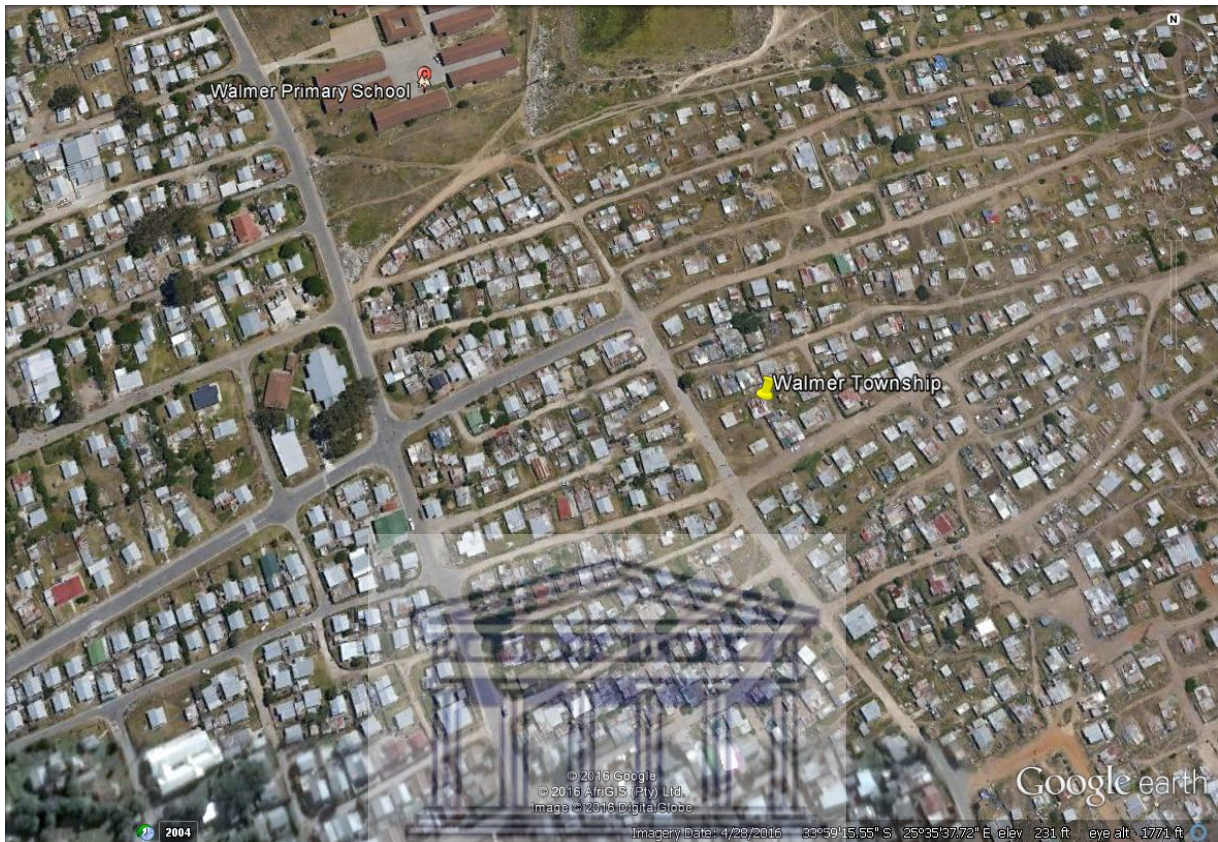
Walmer is a Township within the Nelson Mandela Bay Municipality (NMBM) Based on Visitors Guide (2016) Nelson Mandela Bay bears the rich legacy of an area that saw the first meetings of Khoisan, British, Dutch, German and Xhosa people. As it was the landing place of the 1820 Settlers, it offers a wealth of treasures in the form of historical attractions, museums and places of interest. The Bay has a number of townships which amongst them are New Brighton and Walmer Township. Walmer Township or Gqeba area is the oldest township in Port Elizabeth. It is found next to Emerald Hill and next to Port Elizabeth International Airport.

Walmer is one of few places in South Africa where during Apartheid years a community of mostly Xhosa people remained to exist in the middle of the former white communities (Izizwe, 2012:3). The township is divided into various sections which are Mpoza, Gesi as well as Sporweni, each is divided by a street from the other. Even though the apartheid government of the time tried to evacuate this community, it survived and continued to exist and grow through the support of the surrounding white employers. These employers preferred their domestic workers and gardeners living closer by, as an alternative to 30 km outside town where most black communities were forcibly relocated. This enabled the domestic workers to be able to stay to their employers and work closer. This was how Walmer Township was established and developed. Based on NMBM report 2012/2013 Walmer Township is now home to more than 65000 people. The area is considered to be the one of the poorest areas in Port Elizabeth. It faces many socio-economic challenges such as high crime rate, HIV/AIDS and high unemployment rate.

*'Incidences such as house break-ins have increased rapidly in the area. Other criminal activities involve assault of women and children as well as missing children. The government is not proactive in this regard and the community needs government support'* (Heinz and Hinrichsen, 2004:4).

Most people live in informal houses (shacks) as there are only few formal houses. Maqoma (n.d:1), mentioned that there are informal dwellings without any access to basic services such as water, toilets and electricity. The area is one of the informal settlements that have no proper infrastructure such as water and sanitation and people still use the bucket system. Figure 2 is a map from Google earth which shows Walmer Township. Because of rapid

urbanization and population growth, more shacks are being built and demand for service delivery puts pressure on municipality.



**Figure 2:** Location of Walmer Township in Port Elizabeth

Before the phasing out of the Apartheid government, Walmer Township had no High School to service its growing population. In 1991, Vernon Gamanda was established and merged with Walmer Township's secondary school, Zanamafa, to become Walmer High School in 2003. The staff and administration at Walmer High have been endeavoring to fully support its learners and instill in them a love for learning since then. The school serves a population of approximately 1400 pupils, in grades 8-12, most of who speak Xhosa as their mother tongue.

#### **1.4. Legislation on service delivery**

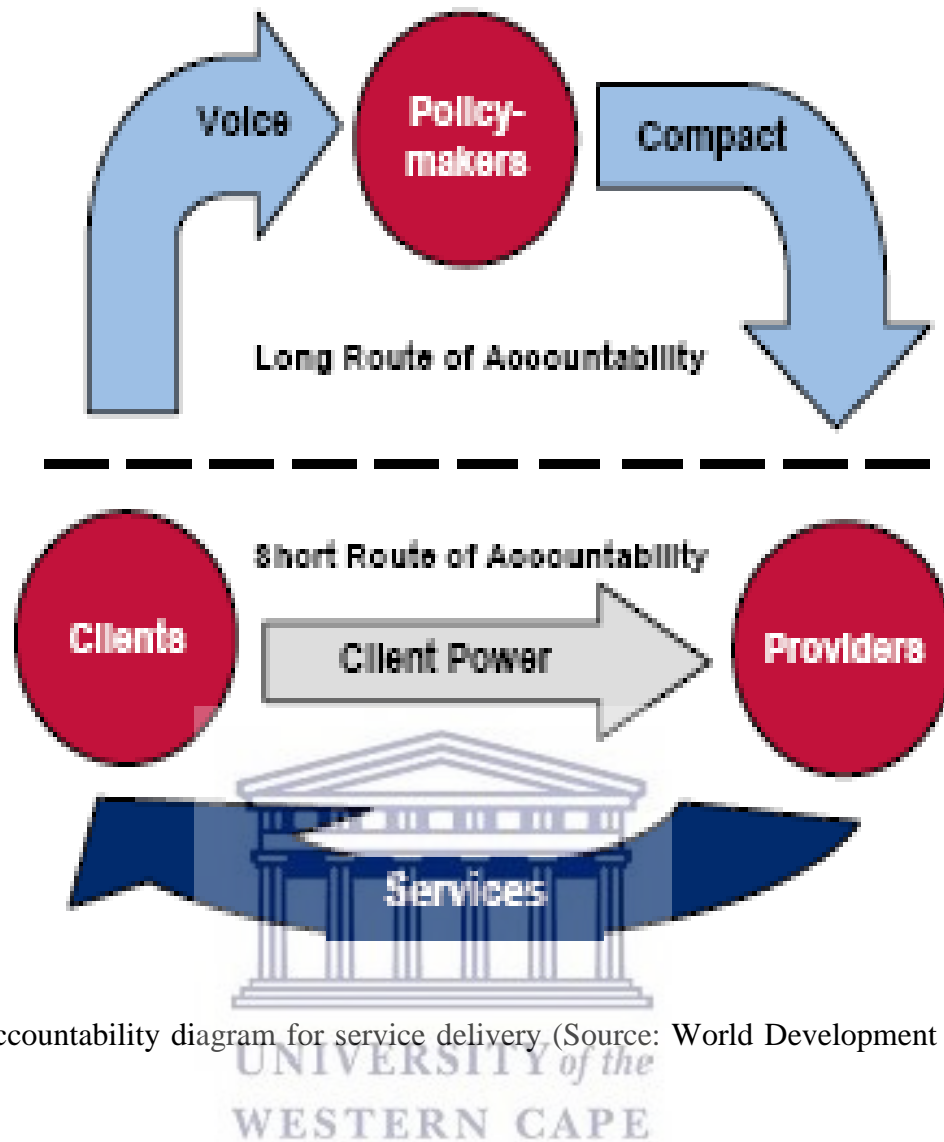
South African government has put in place different kinds of frameworks and legislations to enable effective service delivery to its people. The white paper sets out eight transformation priorities and amongst them service delivery is key (White Paper on Transformation of Public Services (WPTPS), 1995:2). The purpose of the white paper is to give a policy framework as well as practical strategy for the transformation of public service delivery. Improving service



delivery is, therefore the ultimate goal of the public service transformation programme and has to be the main target for all government institutions. Chapter 11 of the WPTPS (1995) requires government departments to identify among other things:

- a) Service standards, defined outputs and targets, and performance indicators, benchmarked against comparable international standards;
- b) Monitoring and evaluation mechanisms and structures, designed to measure progress and introduce corrective action where appropriate;
- c) Plans for staffing, human resource development and organizational capacity building, tailored to service delivery needs;
- d) The redirection of human and other resources from administrative tasks to service provision, particularly for disadvantaged groups and areas;
- e) Potential partnerships with the private sector, non-governmental organizations (NGOs) and Community-Based Organizations (CBOs) which will provide more effective forms of service delivery; and
- f) The development, or particularly through training, of a culture of customer care and of approaches to service delivery that are sensitive to issues of race, gender and disability.

Giving the South African citizens improved service delivery means redressing the imbalance of the past at the same time maintaining the continuity of services to all levels of societies and meeting the needs of those citizens living in poor conditions, such as informal settlement. In order to make services work for poor people it is possible to assess and approach service delivery through an accountability model for service delivery which includes three groups of stakeholders, Namely: (i) citizens who are the clients and influence policymakers; (ii) policymakers influence service providers; who in turn (iii) deliver services to the citizens who are also clients for the services. Figure 3 below illustrates this relationship:



**Figure 3:** Accountability diagram for service delivery. (Source: World Development Report (2004))

If any part of these relationships breaks down, service delivery fails. For example, failure may occur when citizens are unable to influence public action through their long route of accountability.

#### 1.4.1. Public management

Protests in South Africa have been an issue of concern and debate among public managers as well as commentators. Mafolo (2012:21) stated that local government is the target of many incidents due to its poor performance. Municipalities across the country fail to fulfill their responsibilities as well as constitutional obligations (Koma, 2010:112). The performance, which is not in order at municipal levels, stimulated an introduction of turnaround strategies to improve and identify key areas with the aim of strengthening the local government and satisfying the communities (LGTAS, 2009). The literature suggests that improving the

performance of local government needs some level of knowledge and innovation among public managers, for the implementation of turnaround strategies and building an efficient local developmental state.

### **1.5. Importance of public and community participation**

South Africa is challenged by serious problems. Apartheid left a lot of unhealed scars of inequality and economic inefficiency. To date, the gap between the poor and the rich still remains huge - South Africa has one of the highest Gini Coefficient Index<sup>1</sup> (0.63 in 20015) in the world. Improved social services delivery has the potential to assure minimum standards as well as redistribution. Community participation as a concept focuses on the idea that involving stakeholders in decision-making about their communities and broader social issues has important social, economic and political benefits. Participation has been defined in many different ways. Schiibeler (1996) argued that participation refers to a process not the product, the process involves many different actors or stakeholders or participants who determine how and what infrastructure services are delivered. The participation is at one's own will and their effectiveness depends on the stakeholders being convinced that the process of services delivery is in their interests.

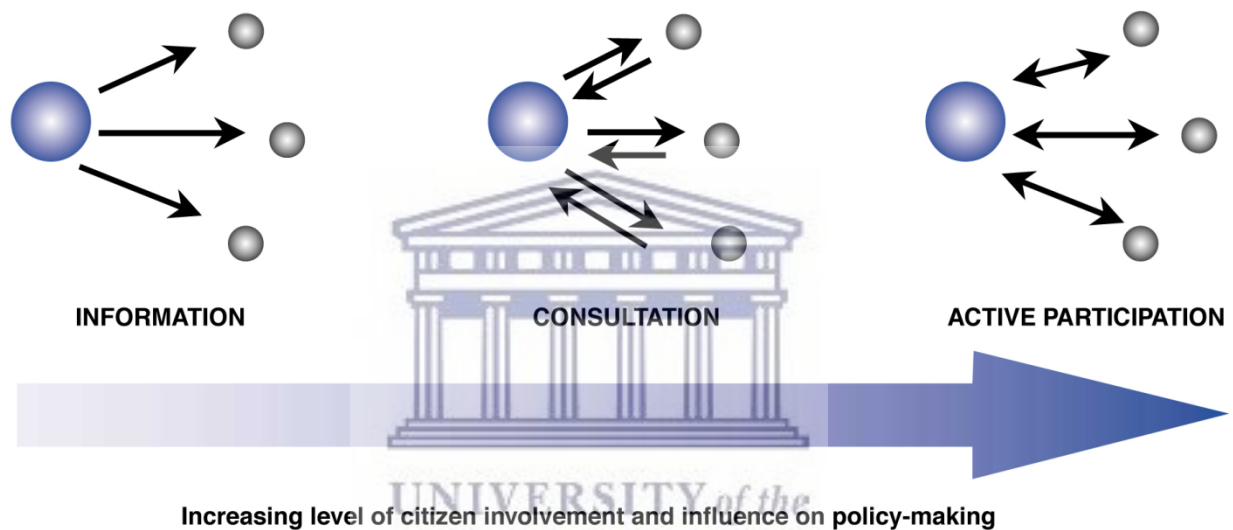
Zhang & abitbol (2016) mentioned that social capital theory argues that the incorporation of citizens into public affairs makes the social capital even much stronger, the reason being that the citizens are involved in the adoption and the implementation of new relevant decisions that will directly influence the community. Ebdon (2002) said that it is not about the number of citizens' that participate but whether all the citizen's opinions are represented. Community participation in service delivery involves far more than the direct delivery of services. A central issue is how different types of participation may contribute to strengthening both the short and long routes of responsibility for service delivery. Effective forms of community participation in service delivery provide both opportunities and incentives for local government officials to respond to community needs.

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<sup>1</sup> South Africa's Gini Coefficient Index was the highest in the world in 2015. The World Bank states the inequality in South Africa had worsened since 1994 despite a decline in poverty (<http://www.engineeringnews.co.za>)

### 1.5.1. Types/models of participation

Amstein (1969) explains that participation can adopt different forms from genuine participation, passive participation, and manipulated participation to pseudo participation. Importance of participation has been emphasized by many scholars such as Karsten (2012:4) who mentioned that citizen's participation never translates to citizen's power and Martin (2010) contends that it is the issue of power specifically that gives rise to the endless events of participation, which is considered as an attempt to ignore the fundamental question of power.



**Figure 4:** Models of participation (Source: Adapted from OECD (2001)).

The above figure 4 explains the process in terms of nature and direction of the relationship between government and the citizens; it involves information, consultation and active participation. Organization of Economic Cooperation and Development (OECD) 2001:11-12 states that in making the relationship stronger with the citizens, the government must make sure that the following are met:

- **Informational** participation is the type that is a one-way relationship in which government produces and delivers information to citizens covering both passive access to information, following demand by citizens, and active measures by government to disseminate information to citizens, for example through government websites, public

records and official gazettes. Information is complete, objective, relevant and easy to comprehend.

- **Consultation** type of participation has clear goals and rules defining the limits of the exercise, and governments' obligation to account for its use of citizens' inputs. It suggests a two-way relationship where citizens provide feedback to government. It is, however, based on prior definition of the issue by government, for which the views of citizens are required. Examples include comments on draft legislation, opinion surveys etc. The point to note about this consultative type of participation is that government is not obliged to integrate and implement the views of the citizens. At worse, it can simply ignore them completely
- **Active** participation provides sufficient time and flexibility to allow for emergence of new ideas and proposals by citizens, as well as mechanisms for their integration into government policymaking processes. It is a relationship based on partnership with government, whereby citizens actively engage in defining the process and content of policymaking. The relationship acknowledges an equal standing for citizens in setting the agenda, proposing options and shaping policy dialogue, though the final decision rests with government. Examples are citizen juries, consensus conferences.

a) CLEAR participation model

According to Lowndes et al. (2006) the C.L.E.A.R tool develops from a framework for understanding social participation which argues that participation is most successful where citizens:

**Can do** – that is, have the resources and knowledge to participate;

**Like to** – that is, have a sense of attachment that reinforces participation;

**Enabled to** – that is, are provided with the opportunity for participation;

**Asked to** – that is, are mobilized by official bodies or voluntary groups;

**Responded to** – that is, see evidence that their views have been considered

This model is there to assist government or civil society to better understand social participation in their communities. It helps public bodies to be able to identify specific strengths as well as problems with participation in their localities and to consider more complete strategies for enhancing public participation (Lowndes and Prachett, 2006). The CLEAR model requires communities to be capacitated and enabled to act, which concludes in the receipt of specifically requested outcomes showing that they are being responded to. The increasing incidence of protests by community members depicts an opposite picture, indicating the lack of specific outcomes and desired feedback from municipal officials.

### **1.5.2. Legislative and policy guidelines for public participation**

Different legislative and policy frameworks for community participation abound in South Africa, and include the following:

#### **a) The Constitution of the Republic of South Africa, Act 108 of 1996.**

The Act 108 of 1996 on South African Constitution sketches the concept of public participation in all spheres of government, precisely Section 152 sub section 1 (e) states that of the fundamental objective of local governments is to encourage the involvement of communities as well as community based organizations in matters that are related to local government.

#### **b) Local Government Municipal Systems Act No. 32 of 2000.**

Municipalities are required to establish suitable mechanisms, processes and procedures, for enabling the participation of local communities in the affairs of the municipality. The Municipal Systems Act (2000), Section 16 (1) obligates municipalities to develop a culture of municipal governance, which works hand-in-hand with formal representative government within a system of participatory governance or public participation (RSA, 2005:14). Additionally, Chapter 3 of the Act also requires municipalities to create conditions that allow the most disadvantaged members of the community such as disabled persons, special groups and illiterate persons as well as poor persons to fully participate in municipal affairs. Furthermore, the Municipal Planning and Performance Management Regulations of 2001, an offshoot of the Municipal Systems Act, provides a legal reference for the Integrated Development Planning (IDP) process, and the formation of an IDP Representative Forum, all these aimed at ensuring that municipalities create an opportunity for the participation of communities in decision-making.

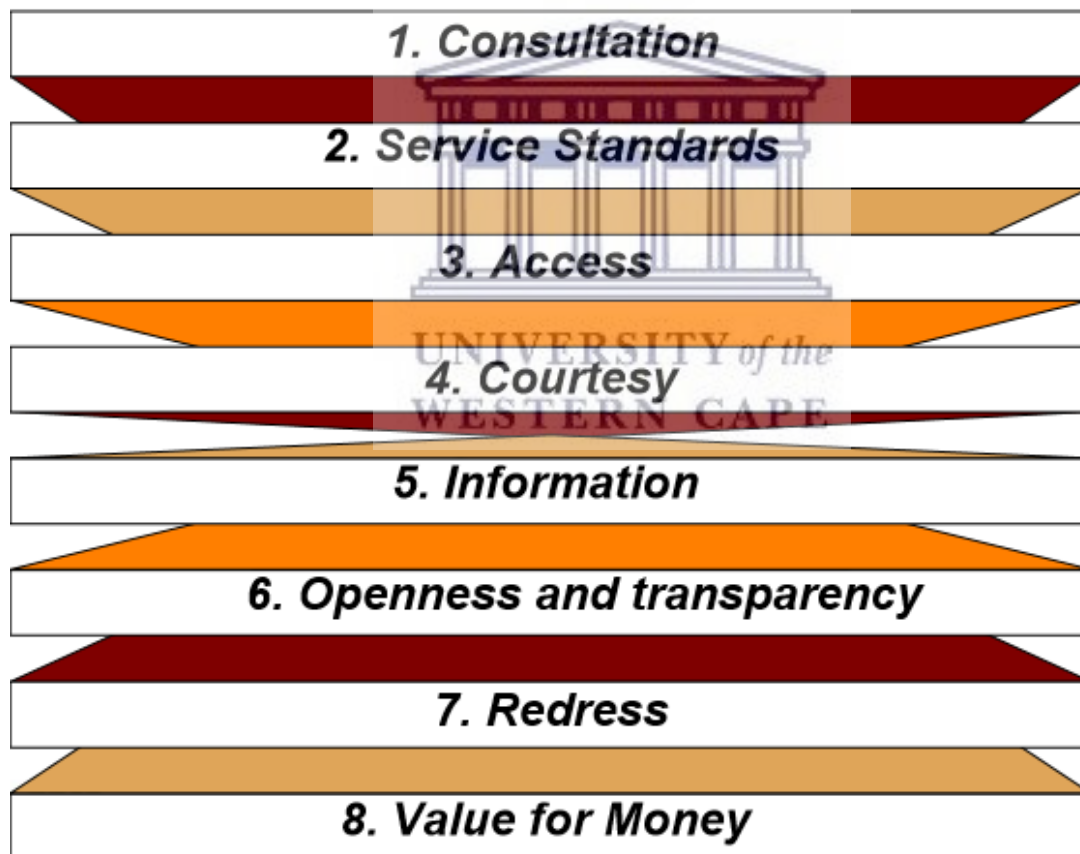


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**c) Batho Pele White Paper (1997).**

‘Batho Pele’, which means ‘People First’ in the Sotho language, was introduced to encourage a service-oriented public service, which strives for excellence and commitment to continuous improvement in the delivery of services. It allows citizens to hold public servants accountable for the level of services delivered, and puts citizens at the center of public service planning and implementation. The Batho Pele consists of ten principles including consultation, setting service standards, increasing access, ensuring courtesy, providing information, openness and transparency, redress, value for money, conducive environment for delivery and impact of service delivered. All these principles put emphasis on adhering to the transformation of public service delivery (DPSA, 2011). The following are the eight principles:

## **BATHO PELE PRINCIPLES**



**Figure 5:** Batho Pele (Source: DPSA (2011))



## **1.6. State of local government in South Africa**

The strategy that was adopted in 1999 of Local Government Turnaround Strategy (LGTAS) follows the incidents of unrest against the backdrop of perceived poor performance of local government is understood as a very important initiative to improve local government as an institution and to deliver to its citizens (Thornhill, 2012:138). The RSA (2009:20) on the other had mentioned that the State of Local Government Overview Report of 2008 that was adopted begins with the drive for change in local government that identifies key development areas for municipalities. Municipalities are obligated to provide basic services and make sure that all the money spent is well considered and accounted for (LGTAS, 2009:20-21)

## **1.7. Rationale and Significance of Research**

Water and sanitation is a problem in most poor urban and rural communities of South Africa, which affects the hygiene and quality of life of people and also, leads to the spread of diseases. Through this study, it is hoped that the findings will assist in suggesting ways to improve water and sanitation services for the community of Walmer Township. The findings will also hopefully help to improve the current water management system and sanitation, and reduce the spread of diseases emanating from poor or lack of hygiene. The study aims to raise awareness of the community about good hygiene practices and also hopefully assist with the speeding up the provision of basic water and sanitation for households in Walmer Township. The study aims also to try to demonstrate to the Nelson Mandela Bay Municipality why they should improve their service deliver services to the community as a matter of urgency. The outcomes of the study will hopefully be improved water and sanitation and better service delivery systems for the Walmer community.

## **1.8. Problem statement**

Although South Africa is a water-scarce it is crucial for the resource to be secured and not deprive to the poor who do not have voices, but rely on government. In improving the water security, there is a need to move away from the traditional top down planning approaches to include a focus on people. Access to adequate good quality water is critical to the well-being of the poor and for their quality of life and livelihoods. Van Koppen et al., (2006:2) mentioned that people's water needs ought to be integrated and be part and parcel of their multi-faceted livelihoods.

Many places within the Eastern Cape and the country as a whole still use the bucket system and in some areas residents have been protesting for many years about the use of bucket system. At the dawn of South African democracy in 1994 a programme dedicated to provide water and sanitation services to the unserved population especially in the rural areas was embarked upon. Even then, people are still waiting for the service to be rendered to them. Walmer Township in Port Elizabeth is amongst the millions of the population who are still waiting for such services. The Millennium Development Goals Report (2008) states that 2.5 billion people across the world remain without improved sanitation, and half a billion of these are in sub-Saharan Africa. Statistics South Africa (2014) pointed out that there was decrease in the usage of the bucket system nation-wide in 2014 when 84, 065 compared to 2008 consumer units were serviced. The 16% drop between 2008 and 2014 was driven mostly by municipalities in Eastern Cape which reduced the provincial total by 15 353 consumer units, from 50 266 in 2013 to 34 913 in 2014. In spite of the falling numbers, Eastern Cape and Free State remain the two provinces where bucket toilets are most common, with Eastern Cape contributing 42% to the national total, and Free State 37%, Statistics South Africa (2014).

### **1.9. Research Objectives**

This study investigated the quantity and quality of water supply in Walmer Township and how these affects sanitation and hygiene in the community. The constitution of South Africa states that everyone has a right of access to basic water supply and sanitation. Thus, the findings from the study could enhance the existing reports or frameworks for improved water supply, sanitation and hygiene in Nelson Mandela Bay Municipality. The study objectives included:

1. To determine the quantity of water available to people in the community of Walmer Township and their measure against the prescribed minimum amount per person or household.
2. To establish the quality of water that is available to people in the community and how it measures against the required minimum amount per person or household.
3. To ascertain how the current quality and quantity of water affects their sanitation and hygiene.
4. To evaluate the level of awareness and understanding amongst the community members on their constitutional right to adequate water supply.

5. To determine the efforts that the NMBM has put in place to meet the required minimum quantity and quality of water supply for Walmer Township.

### **1.10. Research Questions**

The research aims to answer the following question:

1. How does the quantity of water available to people in the community of Walmer Township measure against the prescribed required minimum amount per person or household?
2. What is the quality of water that is available to people in the community of Walmer Township and how does this measure against the required minimum?
3. How does the current quantity and quality of water available to people in the community of Walmer Township affect their sanitation and hygiene?
4. What is the level of awareness and understanding among community members on their constitutional right to adequate water supply on their sanitation and hygiene?
5. What is the Nelson Mandela Bay Municipality doing to meet the required minimum quantity and quality of water supply for Walmer Township Community?

### **1.11. Structure of the study**

**Chapter one** provides the introduction to the study, problem analysis, the study area, the principles on which public management and service delivery are based in South Africa and other background information.

**Chapter Two** presents a review of literature and gives a background of water and sanitation issues in South Africa. The chapter also provides a review of the international, continental and to the national studies on water and sanitation. The chapter also looks at South Africa's water legislation and by laws of the water act. Attention is given to use of water and water scarcity including the conflicts between the study area and the municipality, which leads to protests.

**Chapter Three** outlines the methodology and conceptual framework used for the study

**Chapter Four** outlines the findings of the study, in particular what is happening in the study community because of the lack of adequate water supply and sanitation.

**Chapter five** provides analysis and discussion of the findings using the conceptual framework.

**Chapter Six** provides conclusion of the study and recommendations for improved water supply and sanitation for Walmer Township, and also whether these are applicable to other similar townships and how they can be adapted and implemented in these other townships.

### **Conclusion**

This chapter introduces that study by providing the socio political justification of the study such as the South Africa legislative and policy mandates for provision of basic needs for formally marginalized communities and the underlying issues of service delivery in fulfilling these mandates. Having provided the introduction and background, it outlines the problem statement for the study, the objective of the study, research questions, rationale and significance of the study and finally the structure of the thesis.



## **2. CHAPTER TWO: WATER, SANITATION AND SOCIO-ECONOMIC DEVELOPMENT**

### **2.1.Introduction**

Water and sanitation are challenges that the world faces. Balint (1999:1) stated that there were over one billion people worldwide without water sources and three billion lacked minimally acceptable sanitation facilities. The lack of these services is particularly acute in developing countries where population is high. The global health burden associated with these conditions is staggering. According to Moe and Rheingans (2006) about 4000-6000, children are dying each day from diseases associated with lack of access to safe drinking water, inadequate sanitation and poor hygiene. It has been estimated that by 2050, some 40% the world population could be experiencing water shortages (Ward, 2007:2). South Africa is already a water stressed country and by 2025 it is likely that the water shortage will become more of a problem (Sigenu, 2006:1). The problem people experience with water supply and sanitation in third world countries or developing countries are enormous and complex. There are various explanations for the causes of water and sanitation problems.

According to Phillips et al., (2006) Millennium Development Goals (MDG's) predict that the target of halving the proportion of the population without access to safe drinking water and sanitation (MDG 7) was unlikely to have been met unless there was rapid improvement before 2015. Even though some parts of the world are making progress in meeting these goals UNICEF et al., (2004) mentioned that lack of improved drinking water is still a very serious problem in Asia where about 675 million people are without improved drinking water resources. In South Africa unequal access to safe drinking water has been increasing, which has resulted in an increase in social protests in many areas. The protests have resulted in damage of infrastructure such as roads and buildings. In Sub Saharan Africa about 36% of the population had to have access to basic sanitation by 2015, in order to meet the MDG for sanitation. This means that sanitation had to be provided for approximately 2.1 billion people between 2002 to 2015 when adjusting for population growth (Moe & Rheingan, 2006). The burden of poor sanitation does not just affect the sick but also the people who are nursing the sick because they spend a lot of time on nursing instead of using the time on productive economic activities.

In order to understand the water and sanitation problems internationally, continentally and nationally, this chapter provides reviews of these issues and problems at these various levels.

## **2.2. Global overview of Water and Sanitation**

### **2.2.1. International perspective**

Globally, water and sanitation is a problem that has been there historically (Annamraju et al., 2001:6). According to World Health Organization (WHO) (2000:18), the definition of sanitation may reflect a country's level of economic development, urbanization as well as resources available for sanitation. The definition can also be diverse in both type of a toilet facility and its distance from the house or home. According to WHO (2000) in 1981 about 1.9 billion people lacked access to safe drinking water and about 2 billion did not have access to adequate sanitation. This shows that this problem had been there historically, and it is not new. Years later the problem is still there and continuous, as in 2000 more than 1.1 billion people did not have access to safe drinking water and 2.5 billion lacked access to adequate sanitation (WHO, 2000). This shows that the number has increased and yet there is no solution to the problem. Annamraju et. al., (2001) also pointed out that over the past centuries water was accessed from unreliable sources.

When the hydraulic mission started the building of dams, also the building of cities, the water network emerged. Some states and Empires such as Rome developed organized and centralized systems of water carriers such as canals and siphons for the movement of water. In the Middle East, water was largely distributed by human intervention. In Africa, the Sub-Saharan has had a striking rate of economic growth since the wave of independence, which led to an increase in spending on infrastructure, rising foreign investments etc. Freitas (2013) pointed out that dealing with water related issues such as irrigation, hydropower, fisheries, maritime transport, etc. is crucial for sustainable growth and long term stability. Freitas (2013) further stated that despite the progress made, Sub-Saharan Africa (SSA) still lags behind most regions in the world when it comes to water access. Water resources in the region are not only scarce, but also very poor quality due to pollution, unreliable supply and sanitation infrastructure, thus very small amounts can be used for human consumption. On the other hand, droughts due to climate change also play a role in the scarcity of the resource.

Freitas (2013) elucidated that almost half of SSA suffers from water borne diseases, including diarrhea, which is very common in many of the countries with low levels of acceptable basic sanitation.

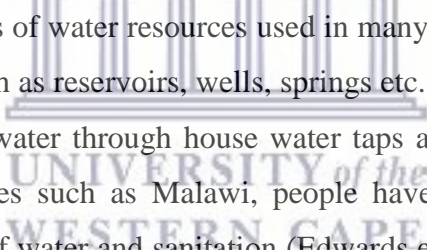
Access to adequate sanitation is fundamental to personal dignity and security, social and psychological well-being, public health, poverty reduction, gender equality, economic development and environmental sustainability. Poor sanitation can promote the spread of diseases that are preventable such as diarrhea and cholera. It can weaken the immune system of HIV positive people and has a major impact on the quality of life of people living with AIDS. World Health Organization (WHO) (2000) mentioned that improved sanitation reduces diarrhea death rates by a third, encourages children particularly girls to stay in school, and has persuasive economic benefits. According to the South Africa's Water Service Act 36 (1998) basic sanitation refers to *“the prescribed minimum standard of services necessary for the safe, hygienic and adequate collection, removal, disposal or purification of human excreta, domestic waste water and sewage from households, including informal households”*

Based on the water supply and sanitation policy of (1994:4) the history of water supply in South Africa cannot be separated from the history of the country, therefore it is the mirror of the history of housing, migration, land as well as social engineering and development. Back then, water problems were caused by the fact that most of the water was for white commercial agriculture. When the Water act of 1956 was passed (Act 54 of 1956) the act was intended for an equitable distribution of water and to authorize firm control over abstraction, supply distribution, reduce pollution of water and treatment. Looking at Nelson Mandela Bay Municipality, the IDP (2015/16:33) outlined plans that 100% of households should have access to water within a 200 m radius by 2030 and all services improved. Currently the areas receive water through standpipes (within a 200 m radius) and water tanks except for communities occupying private land illegally. The Bay also had 90,87% of households that were connected to sanitation, but 20 900 buckets are still in circulation as a means of sanitation and the reason for this is given as limited financial resources in maintaining existing infrastructure, IDP (2018/16:34).

### 2.3. Human access to water and sanitation

Drinking water and sanitation in Africa (2008) defines access to improved water as one that by nature of its construction or through active intervention is protected from outside contamination in particular from contamination with fecal matter. The definitions may differ from country to country because some countries consider ordinary pit latrines as adequate sanitation. WHO (2000:14) revealed that pit latrines may be adequate for rural communities, but may not be appropriate for urban areas. Therefore, more urbanized countries such as Argentina and Brazil, record only flush toilets as adequate and report lower rates of access than poorer countries such as Kenya and Tanzania. This means that a water resource where people access water from should be protected such as the following sources:

- Piped water into dwelling, plot or yard
- Public tap/standpipe
- Tube well/borehole
- Protected dug well
- Protected spring etc.



There are many different kinds of water resources used in many countries in the world. Some countries use technologies such as reservoirs, wells, springs etc. and in some countries people have access to safe drinking water through house water taps also natural resources such as rivers. In some other countries such as Malawi, people have developed their own water technologies due to shortage of water and sanitation (Edwards et.al., (2007:12). According to Edwards et.al., (2007:12) Malawi, people use what is called gravity systems; in this system, water is derived from intake in the streams up the hills then flows from the intakes, which are approximately 1440 meters in elevation. This kind of technology can supply approximately 1600 households and about 8000 people. In some areas, people make use of boreholes, canals, wells, rivers, etc.

According to the Snap shot of drinking water and sanitation in Africa, an improved sanitation facility is defined as one that hygienically separates human excreta from human contact. Contrary to that in rural areas of Kyrgyzstan there are no formal infrastructures for sanitation, pit latrine or septic tanks or sanitary refinements (Kistermann, 2008:2). Sanitation facilities are infrequently emptied and due to that, they have a bad odor. A study by Hurtado (2005:2)



showed that millions of pit latrines have been built in parts of the world and it is possible that more will be built in the near future to resolve the problems of inadequate sanitation.

### **2.3.1. Relationship between poverty, water & sanitation**

According to the UN has defined poverty as:

*'a condition characterized by severe deprivation of basic human needs, including food, safe drinking water, sanitation facilities, health, shelter, education and information. It depends not only on income but also on access to services'* (UN 1995:57).

Poverty is related to water services since the people who cannot afford basic needs are impoverished. People living in poverty do not have much say in many things and in most cases their voices are not heard, they are the ones who suffer most for not having adequate water supply and sanitation. South Africa's background of oppression and segregation played a role in the country's unequal distribution of resources, which includes water resources. Scherrer and Saha (2013:12) pointed out that South Africa's gini-coefficient stands at 0.70 and is one of the highest in the world. This shows that there is a big gap between the rich and the poor.

South Africa is one of the countries where water is perceived as a social good and economic good and mechanisms are applied to manage it. Given that poor households live under excruciating conditions, they need water for basic survival and in some instances for livelihood purposes (such as watering of food gardens). There are many reasons why poverty has become an epidemic in the world specifically in Africa. It can be because of political instability, ethnic conflicts, climate change or other human made causes, but one of the major causes of poverty in Africa is lack of water. Lack of water is the most challenging thing as one cannot grow food, build shelter, stay healthy and go to school, etc. That is how important water is to human life.

### 2.3.2. Population growth

Population growth cannot be excluded from debates on water availability and sanitation. The more the population, the more the demand for resources especially the water resources. The research made by Katri & Vairanvamoorthy (2007:2-9) demonstrated that water resources is becoming depleted throughout the world and this was the result of population increase more especially in the developing countries. The population increase negatively affects the per capita water availability, as Gleick (1998:574) argued. For instance when India's population was less than 400 million, it had per capita water availability of over 5000 cubic meters per year, but looking down fifty years later the population has grown tremendously to over a billion and its per capita water availability has fallen to hardly more than 2000 cubic meters per year (Fletcher, 2002:6).

Africa is home to millions of people and its population increases each day and the demand for resources becomes higher. The countries that have increasing demand are those with high population growth. Roundi-Fahimi et al., (2002:2) mentioned that the Nema<sup>2</sup> population had doubled between the year 1970 and 2001 from 173 million people to 386 million people and reduced the average amount of fresh water availability per capita by more than half to 1650 cubic meters per person per year. This includes countries like Libya and Algeria. The population growth during the 1960's to 1970's had caused and is still causing very serious depletion and degradation of water resources in South Africa and even now demand is still increasing. According to Otieno & Ochieng (2004:120) South Africa is currently categorized as a water-stressed country due to population growth. It was predicted that the country would experience physical water scarcity by 2050 with an annual water availability of less than 1000 cubic meter per capita.

According to Statistics South Africa (2017), the population of South African was 55.7 million in the year 2017. The population has steadily increased over the years and in effect has affected the water and sanitation in the country. The water and sanitation has increasingly become an issue in some parts of the country especially in informal dwellings. The implementation of Millennium Development Goals (MDG's) was also to assist in combating the use of bucket system and for people to have access to safe drinking water that is not far from their households. The target year for elimination of the bucket system and provision of

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<sup>2</sup> This is an Indian sub caste of Bania merchant community mainly found in the state of Madhya Pradesh.

safe was 2010, but the year came and passed and no real change to these issues happened. Due to the fact that the MDG's did not fulfill their mandate Sustainable Development Goals (SDGs) were introduced. These were built on the MDG's and consist of 17 goals that includes new areas such as climate change, economic inequality, innovation, peace and justice. In particular, the SDGs are a blueprint to achieve a better and more sustainable future for all human beings on earth. They address the global challenges faced by the human race, including those related to poverty, inequality, climate, environmental degradation, prosperity, and peace and justice by 2030. Goal number 6 of the SDGs speaks of clean water and sanitation that all people must have. Statistics South Africa mentioned that water is recognized as a strategic resource critical for social and economic development in South Africa . The National Development Plan states that "by 2030 all South Africans should have affordable access to sufficient safe water and hygiene sanitation to live healthy and dignified lives". As South Africa is one of the water stressed country and the 30<sup>th</sup> driest country in the world more priority will be on management and use of water (Statistics South Africa 2017). Goal number 6 of SDGs, according to Unite Nations, aims to make sure that the targets below are met by 2030;

- Achieve universal and equitable access to safe and affordable drinking water for all;
- Achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls as well as those who are in vulnerable situations;
- Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and material halving the proportion of untreated waste water and substantially increasing recycling and safe reuse globally
- Substantially increase water use efficiency across all sectors and ensure sustainable withdrawals and supply freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity.
- Support and strengthen the participation of local communities in improving water and sanitation management

The implementations of the SDG's is to make sure what was not achieved in the MDG's is achieved, hence they involve a number of stakeholders including private and public sectors and the communities to be participating. According to Afonso-Gallegos et al. (2018), the introduction and implementation of the SDGs was well received in South Africa since their

formulation in 2015. In addition, South Africa had assumed a prominent role globally as well as in Africa in guiding the process and the negotiations in adopting the SDG's in its capacity as Chair of the G77 and China.

#### **2.4 South African National Water and Sanitation Master Plan**

The intentions of the master plan were to guide the water sector with investment planning for the development of water resources as well as the delivery of water and sanitation until 2030 (in line with SDGs) and beyond. This was because of the scarcity of water resources in the country and unequal service delivery to communities especially in informal settlements where people still find it difficult to have access to good sanitation and access to nearby water. The National Water and Sanitation Master Plan (NW&SMP) is meant to improve the current situation in order to meet the desired future state of the sector, defined by Government's vision, goals and targets until 2030, in line with the (NDP and the SDGs (NW&SMP, 2017). Under the SDGs and African Union (AU) agenda 2063, South Africa is expected to ensure the availability and sustainable management of water and sanitation for all and eradicate poverty and achieving high standards of living for all. This remains a challenge with the current situation in South Africa and NW&SMP must provide solutions. The Master Plan also aims to increase access to sanitation at local communities and national level. This is because the current access to sanitation remain unsatisfactory. This study contributes to the aims of NW&SMP by assessing the situation of Walmer Township.

#### **2.4. Water Legislation and Water Acts**

*Basic sanitation: “appropriate health and hygiene education” plus “a toilet which is safe, reliable, environmentally sound, easy to clean, provides privacy and protection against the weather, well ventilated, keeps smells to a minimum.....” (Water Services Regulation, 2001:10)*

South Africa in 1994 adopted a neo-liberal water law and policy framework. The literature shows that this legislative framework has proven to work against the constitutional goal of healing the divisions of the past and establishment of a society based on democratic values, social justice and fundamental human rights. The new legislation emphasizes cost recovery. The implementation of this policy has negatively affected poor households. Water became a

commodity for which the poor households cannot afford to pay for and this has led to water cut-offs for some households and communities.

Section 27 (2) of the Constitution states that the state must take reasonable legislative and other measures, within its 'available resources', to achieve the progressive realization of each of the rights (RSA, 1996:1255). The South African constitution speaks about people having rights to water. Section 27(1) (b) of the Constitution states that everyone has the right to have access to sufficient water (RSA, 1996:1255). This one section in the Constitution directly speaks to water. The following sections are also linked to the right to have access to sufficient water but do not specifically have the word 'water' in them. For instance, Section 9(3) states that everyone is equal before the law; therefore, the state may not unfairly discriminate directly or indirectly against anyone on any grounds (RSA 1996:1247). Section 24(a) states that everyone has the right to an environment that is not harmful to their health or well-being (RSA 1996:1251) this speaks to hygiene matters because if there is no water available people will live in unhealthy conditions and prone to disease.

Despite Section 27(2) of the constitution (which states that the state must take reasonable legislative and other measures, within its available resources, to achieve the progressive realization of this right), many people in South Africa still do not have access to safe drinking water and still suffer from unequal access to services. Many poor communities in the country still suffer from high level of inequality in water and sanitation services. According to Martino & Zommers (n.d:15) lack of and unequal access to sufficient water and sanitation in a country's poor communities increases the threat of water-borne diseases which affects and can be detrimental to the health and well-being of such citizens.

#### **2.4.1. National Water Act**

The Water Act of 1998 put stress on the fact that water is a scarce resource and is unevenly distributed and replaced the Riparian Water Act of 1956. The aim of the act is to make sure that the water resource of the country is protected, used efficiently, developed, conserved and controlled in ways that take into account among other factors meeting the basic needs of present and future generations (RSA, 1998:2). Section 3 of the Water Services Act 1997 states that:

*(1) Everyone has a right of access to basic water supply and basic sanitation.*

*(2) Every water services institution must take reasonable measures to realize these rights.*

The act also aims at promoting equitable access to water, and redressing the effects caused by the past racial and gender discrimination. It puts complete responsibility, authority, and use over the nation's water on the national government (RSA, 1998:2). In addition, it gives national government the responsibility of ensuring equitable water allocation for beneficial use, redistribution of water and international matters concerning water services. It aims to provide for growing demand for water and to promote the efficient, sustainable and beneficial use of water in the interest of the public. It distinguishes that the ultimate aim of water resource management is to achieve the sustainable use of water for the benefit of all users. For the above-mentioned things to be achieved some water management strategies need to be put in place.

#### **2.4.2. Free Basic Water Policy of 2001**

The Free Basic Water Policy is a strategy that was introduced in 2001 to assist in stimulating access to basic water supply. This is done through the subsidisation of the existing operating and maintenance costs attached to the supply of basic water services. When the Free Basic Water Policy was introduced in 2001, water services were decentralised from the national to the local sphere. This also saw the introduction of public participation in water services in South Africa. 'The Free Basic Water Policy gives the water services authorities the right to adopt strategies of the practical application of the policy' (Hall et al., 2006:58). Contingent on a municipality's available resources, it has authority to decide how it will implement the Free Basic Water Policy. This also depends on how sustainable the selected method will be after the implementation (Hall, et al., 2006:58). The Free Basic Water Policy allows for the consumption of FBW by households free of charge every month.

Hall et al., (2006:58) pointed out that the policy provides for households to get a minimum of 6kl liters of FBW per month, calculated at 25 liters per person per day for a family of eight. Nonetheless, while the Free Basic Water Policy was introduced to assist in promoting water access it has been criticized for being insufficient for monthly basic survival. According to Muller (2008:72), as infrastructure provision and operational experience increased, concerns were raised about water access. It was discovered and noted that the cost of water was still preventing poor people from increased access to water.

Free Basic Water Policy allows for the following options from which municipalities can choose for its implementation in their areas: the rising of block tariff; targeted credits or subsidies; and service level targeting (Hall, 2006:58). These are defined as follow: The rising block tariff gives the municipality the right to provide FBW to consumers, while the excess beyond the free basic is charged for. This strategy works in areas where households have meters and taps that can be billed for consumption. In the targeted credits, or subsidies, certain amount of water is subsidized for indigent households and credited against their monthly bill. Finally, the service level targeting option guarantees that water access is restricted to the FBW supply. The most common form of service level targeting is the communal tap system, in which a tap should be installed within 200 meters of each household that has no tap in their dwelling yard. In areas where municipalities use this system, households are not likely to carry water quantities that are more than the FBW allowance. Municipalities that have high populations of poor households (Hall et al., 2006:58) usually use this strategy.

#### 2.4.3. The White Paper on water and sanitation

The White Paper's aim was to establish a new national water service and focus on the role of national government in giving a direct delivery function to provide basic water and sanitation to people living in remote areas. The water service act aims to fulfill the constitutional rights of access to basic water and sanitation (RSA 1997:2).

This is vital to pledge that there is sufficient water supply and that the environment is not detrimental to the health or well-being of citizens. Section 3(3) of the Water Services Act mentioned that every water services authority must provide for measures to realize these rights in its water services development plan. The White Paper defines basic water supply as follows:

**Table 1:** Basic water rights for all South African Citizens under the Water Services Act (Section 3(3))

|              |  |
|--------------|--|
| Quantity     | 25 liters per person per day. This is considered the minimum required for direct consumption. It is not measured to be sufficient for a full, healthy and productive life. |
| Cartage      | Maximum distance between a person and the source of water supply should not be more than 200 m.  |
| Availability | The flow rate of water from the source should not be less than 10 liters per minute and water should   |

|               |  |
|---------------|--|
|               | be available every day.  |
| Assurance of  | Schemes for domestic water supply should ensure the availability of "raw"  |
| Supply        | Water for 98% of the time. This means that the service should not fail due to drought more than one year in fifty, on average. Moreover, the operation and maintenance of the system must be effective. The aim should be to have no more than one week's interruption in supply per year. |
| Quality       | The quality of water provided as a basic service should be in accordance with currently accepted minimum standards with respect to health-related chemical and microbial contaminants.   |
| Upgradability | The desire of many communities to upgrade a basic service to provide for household connections should be taken into account during planning.   |

**Source:** RSA (1994:15)

## 2.5. National Sanitation Policy 1996

The act was published by DWAF in October 1996, which followed from the White Paper of 1994 on Water Supply and Sanitation Policy. The act defines sanitation as the principle and practice relating to the collection, removal of human excreta refuse and waste water (Tissington, 2011). The act mentioned the following types of sanitation systems used in South Africa.

- traditional unimproved pits;
- bucket toilets;
- portable chemical toilets;
- Ventilated Improved Pit toilets;
- low flow on-site sanitation (LOFLOS);
- septic tanks and soak ways;
- septic tank effluent drainage (solids-free sewerage) systems; and
- full water-borne sewerage

Many of these systems do not meet the policy's criteria for adequate sanitation for instance the traditional unimproved pits do not provide barrier against flies and the bucket system does not provide adequate sanitation though most people use it.



## **2.6. The White Paper on Basic Household Sanitation, 2001**

The White Paper on Basic Household Sanitation (DWAF, 2001) accentuates the provision of a basic level of household sanitation for the areas with the greatest need, which include informal settlements, and rural areas. The paper focuses on the safe disposal of human waste in conjunction with appropriate health and hygiene practices. The most crucial thing about this White Paper is that the provision of sanitation services should be demand driven and community based with a focus on community participation and household choice.

## **2.7. Policy for Free Basic Sanitation**

The policy for Free Basic Sanitation endorses affordable access by poor households to at least a basic level of sanitation service. To ensure that these services are provided, the water service authority must make sure that the costs are covered by the Local Government Equitable Share and through cross-subsidies within water service authority. The funds need be paid to the water services provider who operates the service or directly to the households. The policy has been developed but has not yet been approved or implemented, and the DWAF is meant to be developing a Free Basic Sanitation together with a set of guidelines to assist with the implementation of the Free Basic Sanitation policy.

## **2.8. The Strategic Framework for Water Services, 2003**

The Framework regards the provision of at least a basic water and sanitation service to all South African citizens; it is a very important policy priority and commits government to making adequate funds available to make this possible.

## **2.9. South Africa's situation on Water & Sanitation**

### **2.9.1. Background**

Hattigh (et al., 20017) mentioned that South Africa is a country that continuously struggles to provide basic water and sanitation services to its citizens. The country has nine (9) provinces namely Eastern Cape, Western Cape, Northern Cape, North West, Gauteng, Orange Free State, Kwa-Zulu-Natal, Mpumalanga and Limpopo. The National Sanitation Policy of 1996 stated that about 21 million people in South Africa do not have access to adequate sanitation and the ones who have access maybe using bucket system, unimproved toilet pit or use bush.

The inadequate excreta disposal facilities and unhygienic practices exemplify South Africa's sanitation problems which many people are unaware of the issue especially people from outside rural areas and townships. The government had no role in providing water and sanitation services during the apartheid era because it was centralized and dominated by wealthy white minority (Hattigh, et. al., 2017). According to Muller (2003) in 1994, the government took the ownership of all water and sanitation services by conveying the Department of Water Affairs and Forestry (DWAF) to make sure that all the South African citizens have access to adequate water supply and sanitation.

The unclean practices of people are often related to lack of access to health and hygiene education, lack of adequate water supply, poor facilities for the safe disposal of water and other domestic waste, and inadequate toilet facilities. According to Bond (2011) there are millions of South Africans who still lack proper access to water services due to their inability to pay for it. Poor areas are underserved due to lack of operating subsidies, which mean that a large percentage of taps installed in the post-apartheid era are now dry. The sanitation backlog requiring clearance in South Africa is associated with the Integrated Sustainable Rural Development Strategy (ISRDS). Government (RSA, 2000:25) targeted that by March 2010 all South Africans had to have access to basic minimum level of sanitation.



### **2.9.2. Urban Water & Sanitation**

The movement of people to the cities has caused so much strain on urban water and sanitation, as the more and more people demand for water supply access and the need for proper sanitation. The UN (2004:8) pointed out that urbanization adds greatly to the need for urban sanitation services in both developed and developing countries. This happens mostly in cities where there are a lot of informal settlements, like in most cities in South Africa (for example, Cape Town, Johannesburg, etc.) with lot of informal dwellers where the demand for water supply and adequate sanitations increases daily as more people move into these areas. World Health Organization (2000) stated that in Asia, about 330 million people lacked access to improved sanitation, accounting for 73 per cent of the world's unserved urban population.

### **2.9.3. Rural Water & Sanitation**

In many rural areas adequate sanitation is a problem, many households use pit latrines, with only a few that use flushed toilets that are within their houses. Access to clean water supply

differs from village to village as some people travel distances to fetch water from streams and in most cases the water is not clean due to the fact that livestock and some other animals go and drink there. When they are there, they contaminate the water because they urinate in the water and leave their faeces in the water. Rural areas have large numbers of un served population that needs services, and it is one of the reasons why some of the people go to the cities (African Development Bank Group, 2001:1) mentioned that most of Africa's population lives in the rural areas and yet rural areas are unserved, with access to services is very low. This is the reason why there are high levels of infant and maternal mortality rates.

#### **2.9.4. Municipal Structure Act No 117b of 1998**

Section 84 of the 1998 Act looks at the functions and powers of the municipalities and states that municipalities have powers for provision of the following:

- Potable water supply systems
- Domestic water waste and sewerage disposal systems
- Solid waste disposal sites
- Regulations for waste disposal
- Bulk waste transfer facilities as well as waste disposal facilities (RSA 1998:3)



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#### **2.9.5. Municipal System Act No 32**

Section 25 of the municipal system Act of 2000 states that all the municipal councils should adopt an IDP, which is single, inclusive, plan for the development of its municipality. The plans should include the provision of sanitation removals as well as other service systems that have an impact on the environment, and that these should take into account national and provincial plans (RSA, 2000:18).

#### **2.10. Water and Sanitation as Basis for Economic and Human Development**

*“Water is intimately linked with education and gender equality. Girls who have to spend time gathering water for the family tend not to be in school. Where schools have sanitation, attendance is higher, especially for girls. Water is connected to health, since millions of children get sick and die every year from*

*water-borne diseases and for lack of basic sanitation and hygiene. Kofi Annan.  
(12<sup>th</sup> UN 28 April, 2004)*

The above statement by former Secretary General of the United Nation clearly shows how important water is to the extent that it is intimately linked with education. Water Aid (2006) argued that water is a prerequisite for access to another precious resource-time. In many third world countries families have no local access to adequate water supply and women and children in these families spend more than two hours walking more than 2km a day to fetch water. These women and children are unable to pursue employment; economic opportunities, literacy training and children miss out going to school to get an education because their time is devoted to survival. Global fresh water resource states that safe drinking water is drawn or taken from fresh water resources, which represent only 2.5% of 1.4 billion cubic kilometers of water covering the earth. Out of the amount of water we have only 1% is available for life on earth and this water has been here and was used million years ago, and today we are still using it because water recycles its- self through the process of water recycle.

The use of water has been growing at more than the rate of population growth in the last century. Fogden (2009) predicted that by 2070, the world's population could peak at 9 billion, and this will increase the demand for water supply for domestic, agricultural as well as industrial uses. Fourteen (14) countries in Africa are already experiencing water stress, another eleven (11) countries are expected to join them by 2025, and by this time 50% of Africa (predicted to have a population of 1.45 billion people by then) will face water stress (WWF, 1986). About 80 of Africa's rivers and lakes are shared by two or more countries, and some countries depend on water that is flowing from outside their national boundaries. Large-scale infrastructure projects, which include dam construction, may worsen the impacts of flooding and drought, threatening people's livelihoods and reducing their access to water. Climate change has caused the decrease or decline in supply of potential drinking water and it accounts for about 20% of the global increase in water scarcity. Fogden (2009) mentioned that the rapid rise in demand and falling supplies of fresh water are leaving many nations to face a chronic water shortage and by 2025. About 1.8 billion people are expected to be living in regions or countries with absolute water scarcity and two thirds of the world's population could be under stress conditions.

## **2.11. Conclusion**

Many African cities are overcrowded because of increased urbanization as a result of search for job opportunities, better school facilities, better infrastructure, etc. The influx of people into urban areas has become uncontrollable and is lead to poor management of solid and liquid wastes produced by cities. Because of that, many sanitation problems arise. Adequate sanitation together with good hygiene and safe water are fundamental to good health, survival and to social and economic development. Many countries around the world, including South Africa, still find it difficult providing adequate sanitation for their entire populations, which leaves people at risk of water, sanitation and hygiene related diseases.

Worldwide about 2.5 billion people lack basic sanitation. According to WHO basic sanitation is having access to facilities for safe disposal of human waste as well as having the ability to maintain hygienic condition. South-Central Asia and East Asia faces the biggest challenge with an additional three quarters of a billion people requiring adequate sanitation by 2015. The sub-Saharan African countries needed to provide an additional one third of a billion people with adequate sanitation by 2015 to meet the requirements of the Millennium Development Goal (MDG), but as things turned out, 2015 passed by and many people still lack adequate water supply and sanitation. Globally about 2.4 million deaths can be prevented annually if everyone practiced suitable hygiene and had reliable sanitation and clean drinking water. These deaths are mostly in developing countries involving children dying from malnutrition, diarrhea and other diseases related to inadequate water and sanitation. Therefore clean drinking water and adequate sanitation are fundamental components of effective public health regimes

This chapter provided an assessment of water and sanitation problems in different part of the world and narrow down to South Africa. The constitution provides that all South African citizens have a right to a minimum water supply, safe drinking water and adequate sanitation. Like in many parts of the world, most poor in rural areas and informal urban settlements in South Africa still lack access to basic water sanitation facilities and services. Human rights and national South African legislation reviewed in this chapter are linked to right of access to sufficient water supply on equal basis. It is therefore the state's responsibility to make sure that these rights are fulfilled, observed and adhered to. As Bond (2011:9) argued, some of clauses in South Africa's constitution allow every protected right to be watered down and gives government the chance to bypass its obligations by restricting people's rights.

Given the problems of water and sanitation service delivery that the study investigated, the Conceptual Framework used for the study was one that combines ‘Grievance’ and ‘Political processes’ theories in relation to social protest. These theories are outlined and explained in this chapter.



### **3. CHAPTER THREE: CONCEPTUAL FRAMEWORK AND METHODOLOGICAL APPROACH**

#### **3.1.Introduction**

This chapter firstly outlines the conceptual framework and the theories underlying the conceptual framework used for the study and secondly provides the methods used in collecting and analyzing the data required to attain the study objectives. A conceptual framework is a tool that helps understanding and interpretation of social reality under scrutiny. Methodology, according to Leedy (1997:9), is the core concept underlying all research process. Methodological approach for social research needs to validate the findings for a study among peers. In this context, this chapter outlines the methods used for the study on service delivery in the Walmer Township.

#### **3.2.Theoretical Framework**

##### **3.2.1. Theory of change**

Theory of change defines long-term goals and maps backwards in terms of both processes and products so as to identify changes that need to have happened earlier (Taplin et al., 2013). This articulates the underlying beliefs and assumptions that guide service delivery strategies that are believed to be critical for producing change as well as improvement in South Africa. The theory of change can start at any stage, it maybe before, during, or after the initiative depending on the use intended.

##### **3.2.2. Conceptual Framework – ‘Grievance’ and ‘Political Processes’ Theories**

Over the years, South Africa has been hit by numerous social protests that in recent times have been largely due to service delivery. Water and sanitation are some of the services that people protested over (Tapela, 2013). The occurrence of protests is not something new in South Africa. However, media reports and hearsay evidence emphasize the ever-increasing spate of protests. Zikhali (2015:78) suggested that these protest could be because of different reasons apart from service delivery such as unfulfilled political promises, Managa (2012:3) saw these as a general frustration with lack of basic services. On the other hand, Burger (2009:1) suggested that poor infrastructure; lack of proper housing, corruption and nepotism within local government may be reasons for the protests.

On the whole water and sanitation services delivery have risen in prominence among the various reasons cited for protests, and in the year 2012 the geographic spread of violence over service delivery in post-apartheid South Africa reached new heights (Tapela, 2013). In the post -apartheid era, South African municipalities were recreated and mandated by policy and legislation to provide services to improve the quality of life for communities. The services, which they were mandated to provide, included the provision of social amenities such as water, sanitation facilities, electricity and infrastructure such as access roads. Hough (2008), Zikhali (2015) and Managa (2012) explained that huge challenges remain in the quest to achieve the national objectives by municipalities, which are aggravated by increasing community demands, lack of capacity, contested geographic demarcations, complex relationships within government, corrupt and predatory behavior of local authorities, political infighting, improperly constituted mandates, etc.

Jabareen (2009:50) defines a 'Conceptual Framework' as a network of interlinked concepts that provide a comprehensive understanding of a phenomenon or phenomena. It is a construct where each concept performs a crucial function. On the other hand, the Framework gives an interpretative approach to social reality. Based on Jabareen (2009:51), a conceptual framework can be developed and constructed through a process of qualitative analysis. Regarding theories and concepts of 'social protest' some literatures suggests that people and/or communities protest because of two main reasons: because they want to; and because they can (Mueller, 2010). McAdam et al., (1996:5) argued that people need to feel both aggrieved about some aspect of their lives and optimistic that as a group together their grievances and problems could be addressed through protest. Shadmehr (2010:2) stated that the literature on the causes of collective protest action gives two broad theories, which are the 'grievance' and the 'political processes'. The grievance theory focuses on discontent outcomes, which are usually conflicts (Buechlar, 2004). On the other hand, the political theories explain conflict as being a result of political opportunities and resources, and focuses on expectations of the cost of the protest and the chances of success.

Van Stekeleburg and Klandermans (2013:887) argued that the grievance theories consist of relative deprivation theory and the social justice theory. The social justice theory is subdivided into distributive justice, which refers to the fairness of outcomes, and procedural justice which refers to the fairness of decision-making procedures and the relational aspects



of the social process. According to their proposition, people want respect and dignity in their daily lives and that is the reason they care more about how they are treated, than about outcomes. The reasons people resort to protest could therefore be explained as due to grievances they have, which include relative deprivation, social injustice, and frustration-aggression, among others. Equally, if people can protest the focus turns to how or the mechanism that assists the processes, which are outlined in the collective behavior and political process theories. These theories (grievance and political processes) were central as the Conceptual Framework for this study. As Tapela (2013) argued, the majority of social protests associated with service delivery mostly happen in working class urban and peri - urban areas that are characterized by high levels of poverty as well as high rate of unemployment. The other characteristics of these communities include inequality, relative deprivation, marginalization, and communication breakdown among different levels government - municipalities, provincial and national that are responsible for policy, legislation and service delivery.

### **3.3. Research Methodology**

Kombrabail (2009) states that a research design is a plan of methods and procedures for acquiring the information needed. For this study, a multi-pronged approach was used including qualitative methods, quantitative analysis of findings and use of secondary material.

#### **3.3.1. Qualitative approach**

Qualitative research according to Babbie & Mouton (2001) involves studying human action in a natural setting and through the eyes of the actors themselves. The research includes collecting, analyzing as well as interpreting the data through observing what people do or say. This research was mainly qualitative in nature. This kind of research includes virtually any information that can be captured and that is not numerical.

For the empirical field work, the qualitative method used in collecting the data and information mainly used unstructured (open ended) interviews, both for individuals and focus group. Question guides where used for the unstructured interviews. A structured questionnaire was also used for collecting person information of the interviewees such as name, age, gender, level of education, etc. The question guides (or research instrument) used

and the structured questionnaire used are attached in the appendix. The student also used observation as part of visually perceiving and understand the infrastructural issues and sanitation and hygiene issues in the study community. Photographs of some of these form part of capturing such observations.

The use of open ended interviews was important for this study. The strong motivations as to why open ended questionnaires were used in the study were:

- To get to know more about the situation, of water and sanitation by allowing interviewees to expand on their answers ,
- To allow interviewees to articulate their views regarding water and sanitation,
- Get an understanding of underlying reasons and perspectives as to why they might be dissatisfied with services and service delivery,
- Discover and uncover the dominant trends in thoughts perceptions and opinions of the community members.

### **3.3.2. Sampling strategy and data collection**

Fink (2003:1) describes a sample as a proportion or subset of a larger group called a sample population and goes on and to say that a good sample is a miniature version of the population from which it is drawn. Critically therefore, a sampling method includes taking representative selection of the population and using the data that is collected as research information. This is to ensure that the findings can be confidently validated as representing the actual sample population. The student chose the community of Walmer Township in Port Elizabeth as the case study community. The reason for selecting this community was because it was evident to the student that the area faces water and sanitation problems which affect the community in terms of hygiene and quality of life. In addition, the student is familiar with the area. .

The unit for sampling was the household, as well as the homes for children who have no parents (children headed households). Walmer Township has about 6500 households and almost all of them are facing the similar problems in terms of water and sanitation, and have similar social economic characteristics. Among these households 50 households were be selected for in depth interviews. There are two standard categories of the sampling methods, namely probability sampling and non-probability sampling. Probability sampling is

sometimes called random sampling whereas non-probability sampling is sometimes called non-random sampling. The 50 households that had been selected for interviewing were selected randomly, an approach that was supposed to give chance for each household to be selected. In this context, Henry (1990:17) defines probability sampling as a tool that can reduce possible bias and sampling errors.

### **3.4. Literature Review**

A literature review was used in the collection of secondary data and information. The information was obtained from various sources such as journals, research reports, official water reports, approved post graduate dissertations, as well as the use of internet. The information was collected from international, continental and from local document secondary sources. Where these have been used as sources, they have been fully references.

### **3.5. Problems encountered during the study**

The major limitation encountered in the study was the challenge of safety, especially during the conduct of the interviews and while observation-based data and information within the Township. The area has a high crime rate, which includes drug and alcohol abuse. In addition, the area has a lot of unemployed youth who move up and down the street which made the student uncomfortable and scared. Moving from one household to another in an unsafe area without knowing what might be encountered on the way to the next plot, or even within a plot was very numbing. Conducting fieldwork in the Township was therefore risky and dangerous at times. Finally, some of the household members were excited, thinking that the student was bringing change to their situation and thus got disappointed when told that interviews were for study purposes. In fact in some instances people got were be angry and walked away from the interview. Some community members refused to participate since they were not going to receive any incentive for their participation. These problems resulted in some of the delays in data collection for the study.

### **3.6. Limitations of the study**

Leedy and Ormrod (2005) argued that each study has a set of limitations. This study and its findings are based on Walmer Township, in Nelson Mandela Bay Municipality, which is only but one of a large number of similar townships in South Africa. One must therefore be

cautious about the applicability and generalization of the findings to other areas and townships. Another issue to be aware of is that Townships in South Africa and the legislative mandates governing provision of services for these might not be applicable to other countries in the African Regional, let alone internationally beyond Africa. Therefore while the findings could be of academic and policy value, their applicability for other situations could be limited.

### **3.7. Conclusion**

This chapter outlines the conceptual framework, and also the methodological approach used for the study. The study used a conceptual framework that combines grievance and political processes for understanding social protest such as that around service delivery. This was seen as the ideal conceptual framework for the study. The methodological approach used was mainly qualitative using unstructured open ended interviews targeting representatives of fifty households, municipal officials and political representatives. It also provides that secondary information was used and finally cautions about the limitation of the study in terms of applicability, especially beyond South Africa.



## **4. CHAPTER FOUR: STUDY FINDINGS AND RESULTS FROM INTERVIEWS AND OBSERVATIONS**

### **4.1. Introduction**

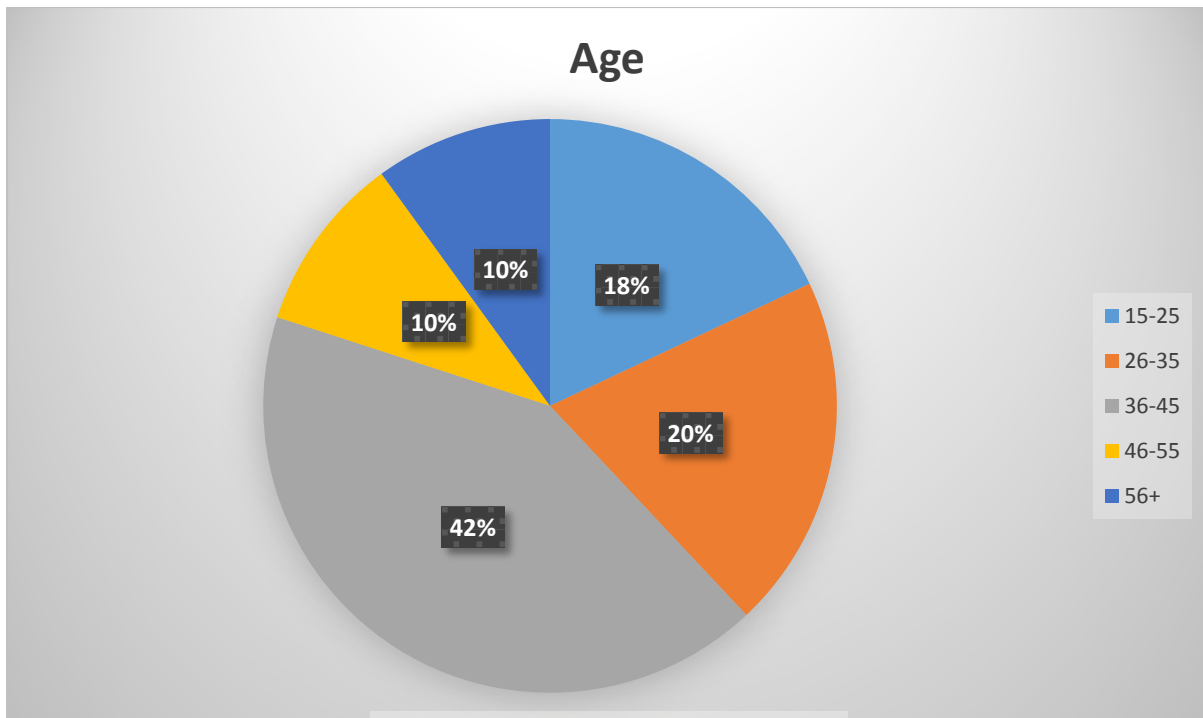
This chapter provides the results and findings of interviews conducted with a sample of households in Walmer Township and observations by the student as a result of working within the township and its resident population. Data was categorized and coded as part of the presentation of the results and findings. The findings are interpreted and data explained with the help of tables, figures and statistical information.

### **4.2. Interview results and findings**

This part of the section will be discussing the findings of the interviews on water and sanitation with the residents of Walmer Township. The community as mentioned in the first chapter is divided into three sections namely; Mpoza, Gesi and Sporweni. All these areas use the bucket system. There are two different types of bucket systems being used in these areas - the hired bucket toilets and the stable or still bucket toilets. Most people that were interviewed were those using stable toilets (80%) and the other 20% were those using the hired toilets. This is because the hired bucket toilets are not as many as the stable bucket toilet. Most of the hired toilets are located in Gesi.

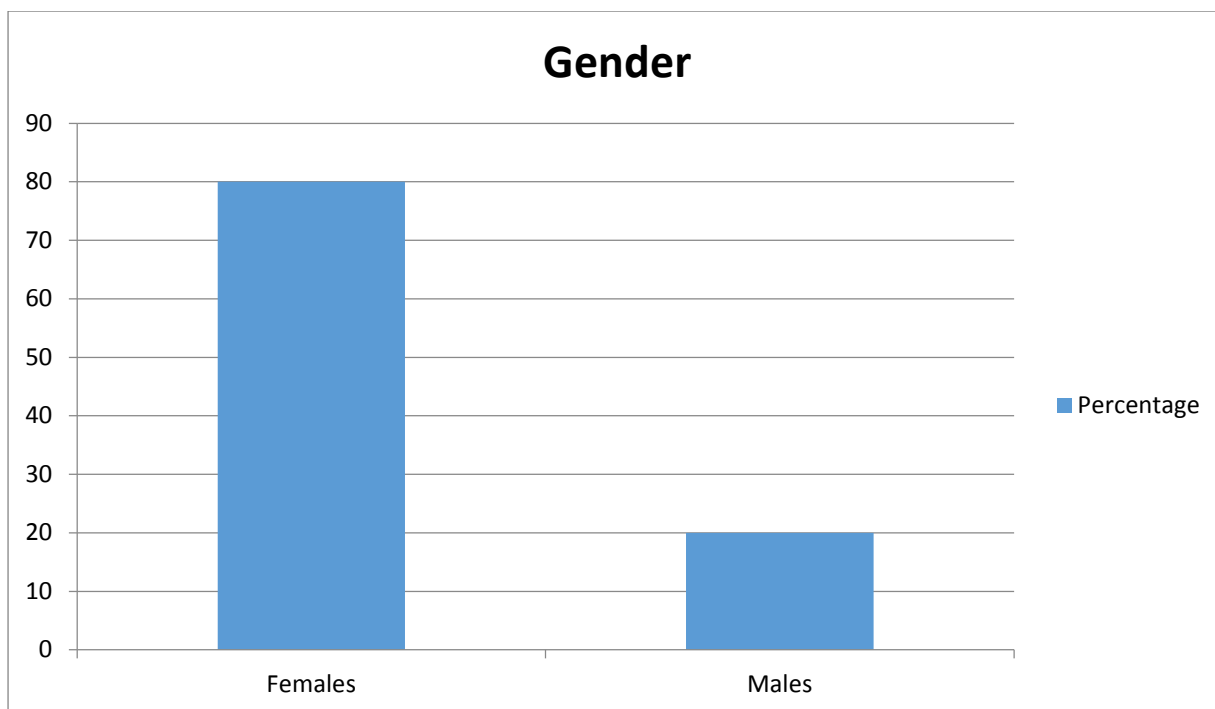
Stand point taps are used by the members of the community to fetch water. Though there are some formal houses within the area where some people rent ground for informal houses within the fenced perimeter of such houses, which use flushed toilets, the focus will not be on these but to those who use the bucket system.

### **4.3. Characteristics of sampled population**



**Figure 6:** Age groups of the interviewed community members

Figure 6 shows the age groups of the randomly selected community members of Walmer Township who were interviewed. The above figure shows that 42% of the Walmer residents of the selected representatives that had been interviewed were between the ages 36 and 45 years, and within this age group of interviewees females were the majority. 20% were young adults (youths) between the ages of 26 and 35. Most of these also require service delivery because they have their own shacks. The third largest age group of interviewees was 15 to 25 years, which includes young adults and teenagers, the majority of who are dependents. 10% of the interviewees were the aged between 46 and 55 years old while the other 10% were the aged of at least 56 years or older than this. This last group of the aged minority of old people which is 10% usually stay at home and send their children and grandchildren to fetch water. This group of the aged do not participate much in matters of service delivery even though these do affect them also.

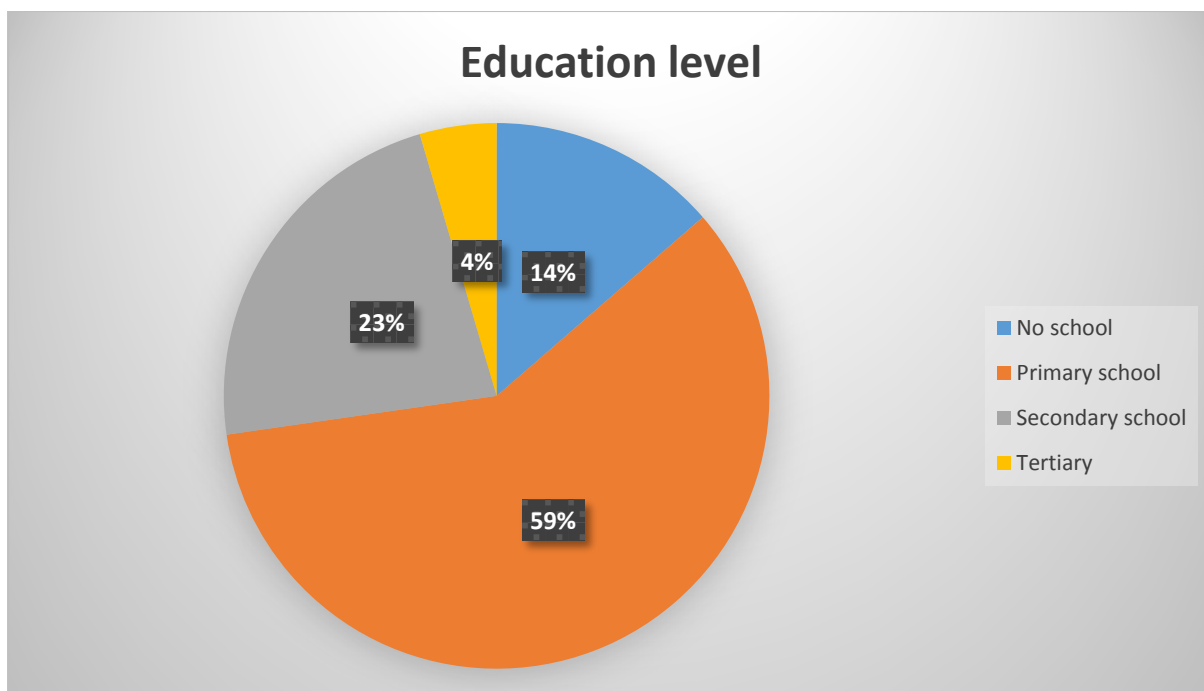


**Figure 7:** Gender proportion of people who fetch water

Figure 7 above shows the gender proportion of people who actually fetch and use water. The most people who fetch and use water are females (80% compared to 20% of males). As a result it was the females who were more willing to be interviewed and provide information, and if it happened that the male was in the house when the interview was being conducted, most would excuse himself and go to sit outside.

#### **4.3.1. People living in the household**

The maximum number of people living together in a household was. Some members of the households were relatives from village homes who came to look for jobs in the city, while others were the children of the house owner, and grandchildren (some children had children of their own). It is very common to find at least three generations of relatives in a single household in the area. In many of these households people were not employed, others were looking for the employment, while others just depended on social grant money. The combined proportion of the people interviewed who are unemployed in each household was 60%

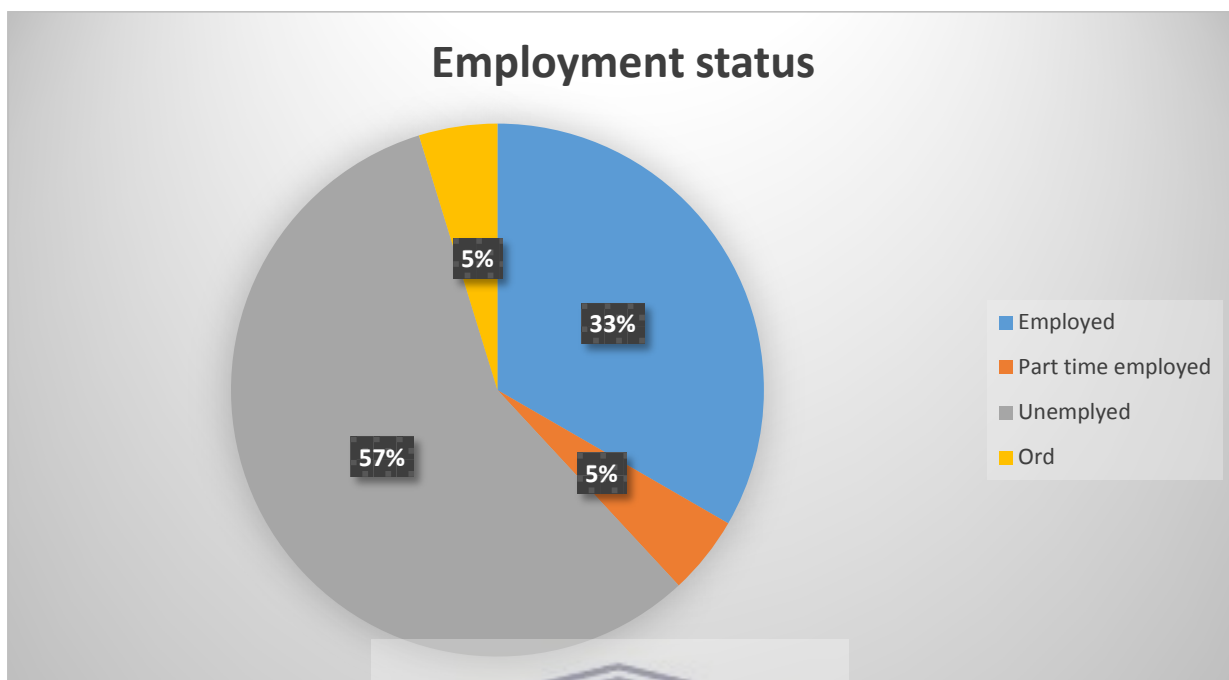


**Figure 8:** Education levels of interviewees

The majority of the community members interviewed (59%) had obtained primary education which is up to grade seven, while 23% had secondary school education. The proportion of the people who had tertiary education was 14%. 4% had never ever attended school at all.

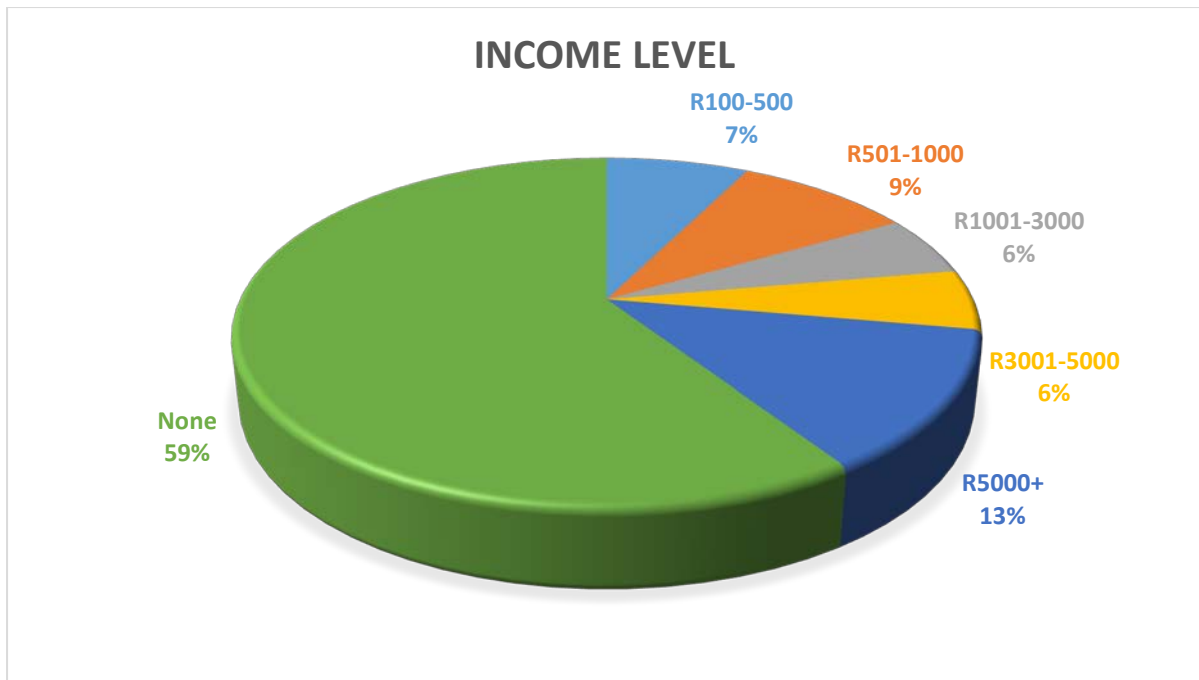
The elderly people in this community were the ones who did not have any form education (the 4% above); the reason for this was because back in the old days education did not receive priority in rural areas, according to one elderly person interviewed. . This interviewee pointed out that in old days, they were encouraged to go and find work to assist the family. Particularly if one is the first born in the family, they were expected and required help the other younger siblings. Post 1994, government has paid attention to assisting old people with basic education. In this context, government introduced Adult Basic Education and Training (ABET) to assist old people to get basic functional education. One interviewee claimed that government was now spending millions on education compared to water and sanitation sector, which is why there are water and sanitation problems. Satterthwaite (1997:17) supports this notion by arguing that education received greater priority than water and sanitation. Government is now offering free education for all and people are encouraged to get an education. In South Africa today finding a good job without a qualification is not easy; in fact it is almost impossible.





**Figure 9:** Employment status of interviewees

Figure 9 shows that 57% of people interviewed were unemployed and this included old people who depend on old age grants. 33% of people were employed and these are the people who work in the nearby suburb as domestic workers, others work at the airport, the factories that are close by as well as in the municipality. About 5% of those interviewed were part time workers. These worked whenever they could find piece work or act as substitute for those employed. On average, this group worked two to three times a week. They also worked in the nearby suburbs and around Walmer Township in salons and spaza shops. Another 5% were people who assist within the area as part time assistants while other in this group sell sweets and chips within the township. The unemployment rate is higher amongst females. One of the reasons for this is that most working age females have babies that they take care of, and thus tend to depend on men or child grant for most necessities. One of the parent female respondent mentioned that they do not feel comfortable to leave their children at home or with strangers because the area is not safe thus why they prefer to stay at home.



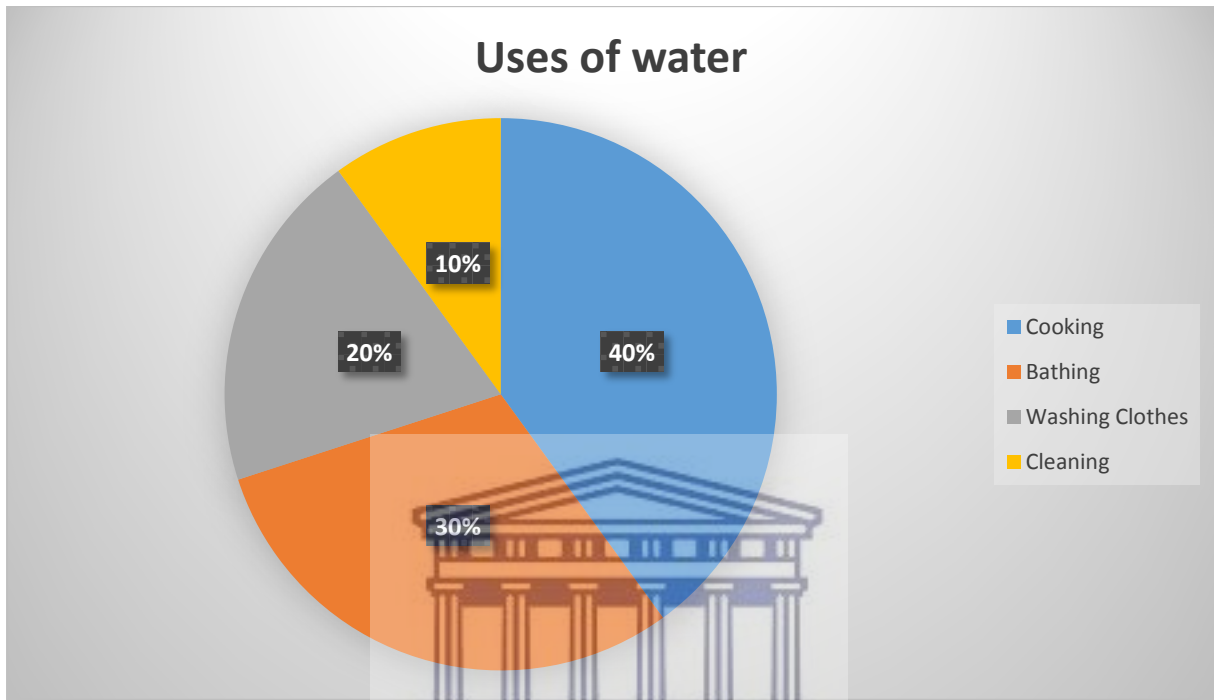
**Figure 10:** Proportions of interviewees who received regular and the levels of such income

Figure 10 shows that 59% of the respondents were not getting a regular income, while 13% of respondents were getting wages of over R5000 per month. Most of these from the 13% respondents were people who work for the municipality. The 6% of respondents who earned between R3001 and R5000 per month were those that worked overtime hours and during weekends at the airport and the surrounding factories in the area. 6% of the respondents who earned between R1001 and R3000 per month were those who worked as domestic workers in the nearby suburbs. Respondents who earned between R501 and R1000 per month comprised 9% of the sample and were those who worked on piece jobs and depended on social grants, while the other 7% of respondents earned between R100 and R500 per month through selling sweets, snacks and from assisting other people like doing gardening.

Due to the high rate of unemployment, many families survived on pension money and social grants, which usually resulted in being insufficient for their daily needs for the whole monthly cycle. These people fall under the 59% of the respondents.

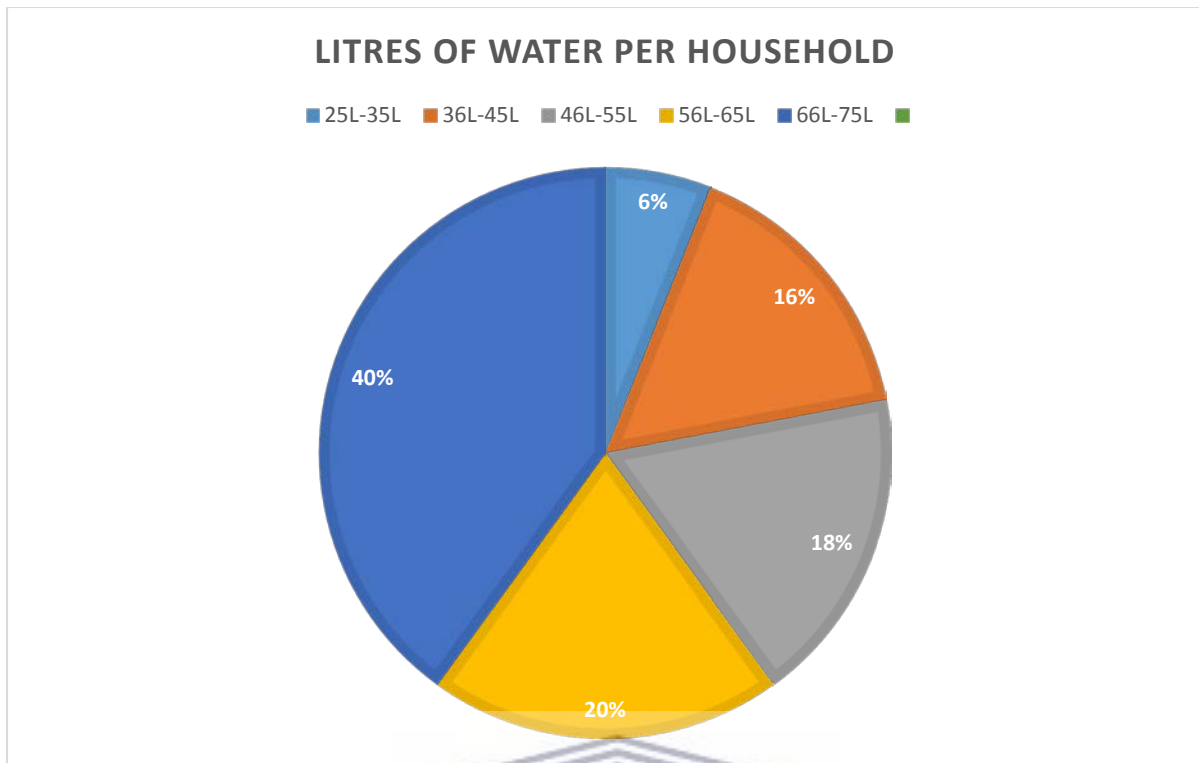
#### 4.4. Water availability and usage

Walmer Township households use water for different uses, but the most common uses are for cooking, bathing, cleaning and washing clothes. Gardening is not being practice by the community because of luck space.



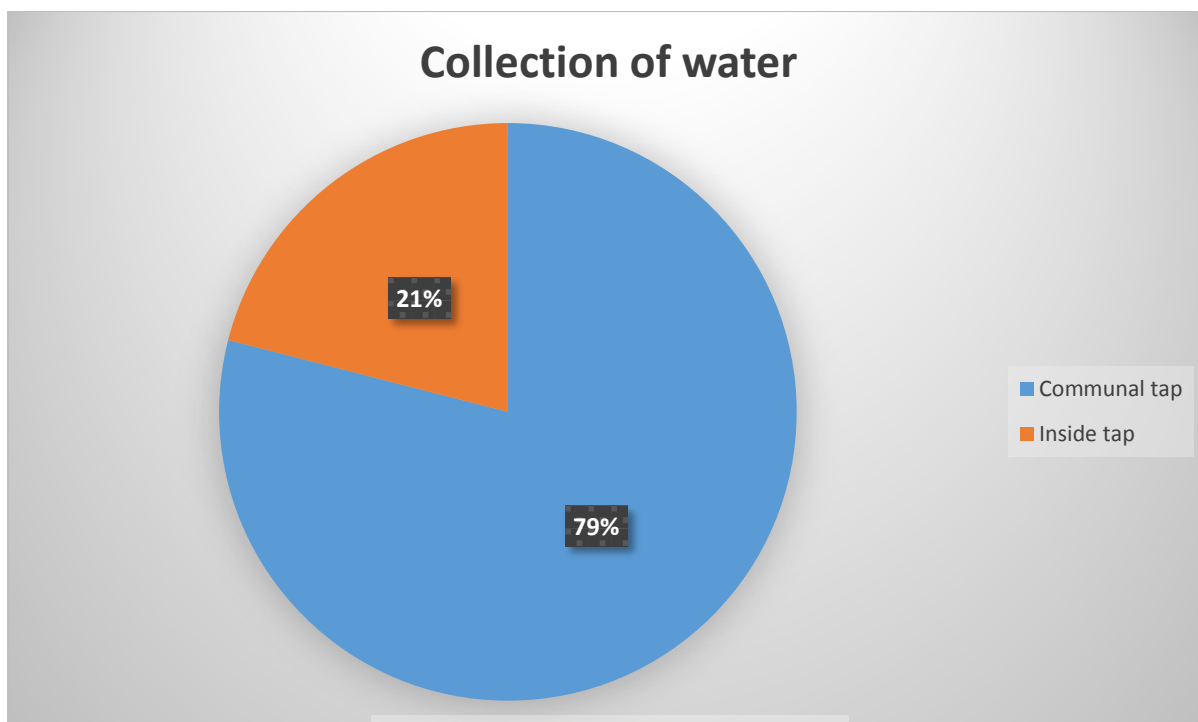
**Figure 11:** Number of people using water for the mentioned activities

Figure 11 presents the main uses of water in the Walmer community. The figure shows that 40% of respondents said that water is used for cooking, followed by the 30% who said that they used water for bathing. Cleaning and washing clothes had the lowest use proportion which were 10% and 20% respectively, this is because some of the residents do not stay home most of the time due to work and also due to their working hours' night shifts and days shifts. As a result they do not have time to clean and/or wash their clothes only when they get the chance. The other reason that they gave was the distance from the stand point tap.



**Figure 12:** Volumes of water used per household

Figure 12 shows the amount of water that each of the respondent households used. The figure illustrates that 40% of the household used between 66L and 75L per day, and this was because of the number of people in such households was more than six day. The lowest proportion was 6% household which used 25L-35L of water per day, and these are the households with few members (maximum three members in the household). Household members do their cleaning mostly at weekends though; they do cook and bathe when they get home. The reason for the cleaning and washing during the weekend is because they work during the week and there only few members of the household in the house during the day on working days of the week. As the size of a household decreases, so does the amount of water they use. People mentioned that the water that they collect from the taps is adequate though it would be better if they had their own taps inside their yards. The people who live in formal houses used more water than those living in informal houses; this is because the former flush toilets and wash basins all the time a person goes to the toilet. Some of the former also use bath tabs, which consume a lot of water.



**Figure 13:** Source of water for households

Figure 13 gives a picture of where people get their water for their daily uses. 79% of the respondents got their water from communal stand point taps, which have been provided by the municipality and are thus the property of the Nelson Mandela Bay Municipality. These taps are located along the sides of streets in each ward and their official location was 200m radius from each other so that all household are within 200 meters from a communal tap. But due to the unplanned expansion of the township, one can clearly see that it is no longer the case – a lot of households are much further than 200 meters from their nearest communal taps. The communal taps were installed in different years and the first slot was installed in 1997 and the second lot in 2013. These communal taps are being managed by water point management committees elected by residents using the specific communal tap. (But) the communal taps are supposed to be maintained by the municipality (because they belong the municipality). So whenever problems arise with the taps or the communal water system, for example leaking, the water point management committee for the specific tap/area where the problem has arisen has to report the problem to the ward committee, then the councilor. The councilor will then present the matter to the municipality. Thus there is protocol that has to be followed when reporting the matter, this process takes time, up to a month or more than a month hence the community sometimes fix the problem themselves or engage in public protests. The 21% of respondents who had inside taps were the ones who rent informal

houses or ground within the yards of formal house, and in most instances use their landlord's tap.

**Table 2:** Level of satisfaction with water quality

| Response | Number of respondents | % of the respondents |
|----------|-----------------------|----------------------|
| Yes      | 43                    | 86%                  |
| No       | 7                     | 14%                  |

Table 2 shows the responses in terms of levels of satisfaction with the quality of water that respondents got from the communal taps. 86% of the respondents said that they were happy with the quality of water that they got, while 14% said that they are not happy with the quality of water that they got sometimes. The reason the latter mentioned in reference to their unhappiness was that when there is a leak and the water is disconnected, when the water is re-connected it comes out very dirty for a while. .

All the community members that are in informal housing do not pay for the water that they use, while those that live in formal and proper houses and structures (who are sometimes neighbors to the informal dwellings) pay for the water. They pay according to their usage and each house has a meter that is checked for billing of water usage.

**Table 3:** Number of people that had experienced water shortage

| Response | Number of respondents | % of the respondents |
|----------|-----------------------|----------------------|
| Yes      | 4                     | 8%                   |
| No       | 46                    | 92%                  |

Table 5 shows the number of respondents that had experienced water shortage. 92% said that they had never experienced any kind of shortage, while 8% said they had experienced shortages. The reason for the shortage was given as being the leaks, which could take as long as two days to fix depending on the severity of the leak. During this time people would not have water until the leak is fixed.

#### 4.5.Human waste disposal

Walmer is a huge area that has both formal houses and informal houses. The informal houses use the bucket system, and there are two types of bucket systems: the hire buckets and the municipal buckets that are inside the yards of some residents as public toilets since anyone can use them when passing. The hired buckets are blue in colour and were introduced in 2016, while the municipal ones are black. Because the latter are old some of them have broken down and some people have built zinc structures to substitute the black cover they had before. All the bucket toilets are supposed to be serviced weekly.



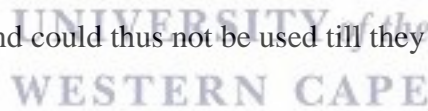
**Figure 14:** Options for disposal of human waste

Figure 14 provides the main options for disposal of human waste for the Walmer residents. 80% of the respondents said that they used bucket toilets, while 10% said that they used their landlord's toilets. The people who said that they used landlord's toilets were mostly ones who rented ground for their shacks within the formal houses belonging to their landlords. The landlords charge an agreed monthly rent to the people who rent ground for their shacks in their yards. In addition, the shack tenants pay for the water which usually also includes the use of the toilet and electricity belonging to the landlord. The other 10% were people who did not share their toilet with anyone other than the family members. The communal toilets (which are mostly the bucket toilets) are managed by management committees, and it is the

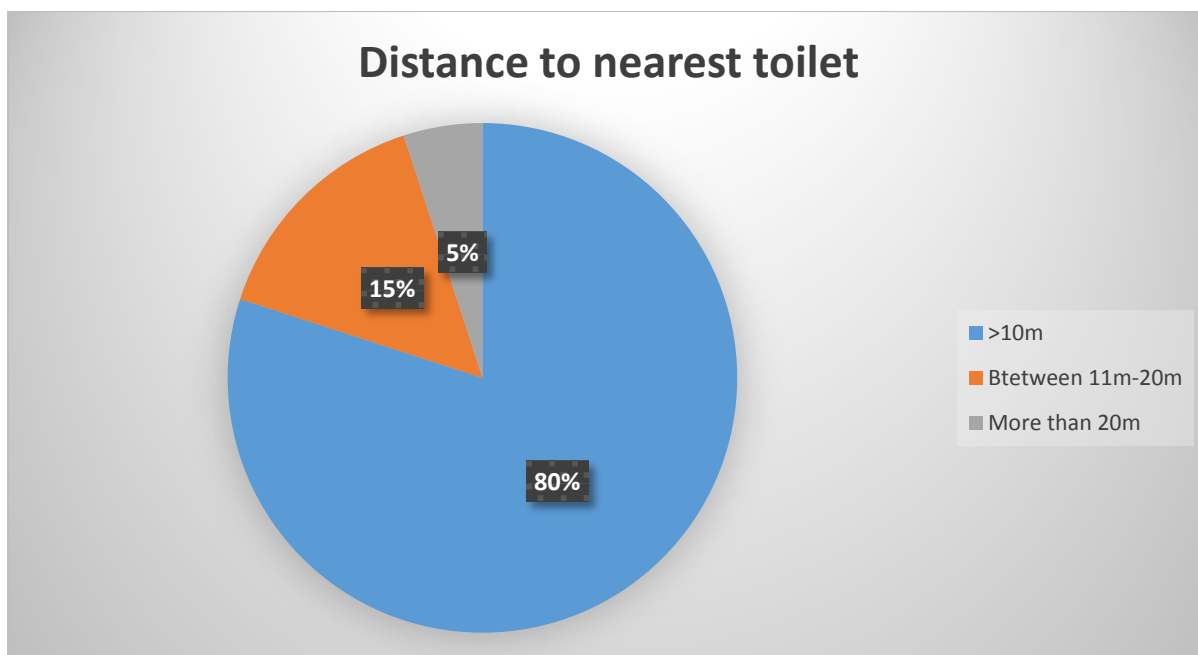
management committees that report the faults to the municipalities and to the private company for hired bucket system.

The area has also got some shebeens and salons that operate on daily basis. These businesses also require and use water and toilets. The salons mostly use water from the communal taps that are close to them and usually, they rent space for a container that is used as a salon from the formal houses. The arrangement is that they pay for the electricity and space they have occupied, while others even pay for the use of the landlord's toilet for themselves and their clients on monthly basis. The people from the shebeens use any toilets that are close to the joint whenever they want to use a toilet.

The people who use the communal toilets have different distances that they have to walk to get to the toilet. Figure 15 below indicates the average distance of location of the toilets to each respondent household. 80% of the respondents said that they had toilets that were located less than 10m, 15% said that they had toilets located at a distance between 11m and 20m and only 5% that used a toilet that was more than 20m away. The reason household members used a toilet that was more than 20m away from their houses was because sometimes the nearby toilets were being used by others so that they had no choice but to walk a distance to get an available toilet. In other cases they used distant toilets because the nearby toilets were full and/or dirty and could thus not be used till they had been serviced.







**Figure 15:** Location of nearest toilet

The total average number of people using each communal toilet is different depending on how many people live in each household that uses the toilet.

**Table 4:** Number of people per household using the toilet

| No. of respondent household      | Average total number of people using a toilet (10 people per household) |
|----------------------------------|---|
| 2                                | 20  |
| 8                                | 80  |
| 10                               | 100   |
| 20                               | 200   |
| 6                                | 60  |
| 4                                | 40  |
| <b>Average number per toilet</b> | <b>83</b>   |

Table 4 shows the number of respondent household in the first column and the second column shows the average total number of people from those households using a single toilet. The average number of people per household was ten (10), and this was used for the

estimation of number of people sharing a toilet. The least number of households per toilet was two (therefore about 20 people sharing a toilet) while the highest was twenty households (therefore about 200 people sharing a single toilet). Thus the average number of people per each toilet in the township was 83.



**Figure 16:** A bucket toilet in Walmer Township

For example, for this one toilet shown in figure 16, eight people share the toilet and sometimes it gets full and spills out, which make the area dirty and stinky.

According to Stats SA about 35% of all bucket toilets in South Africa are found in Nelson Mndela Bay. The area does not have adequate water supply and the stand point taps from where people fetch water are not hygienically clean. Sometimes the water is available and sometimes it is not.

**Table 5:** Functionality of the toilet

| Response | Number of respondents | proportion of response |
|----------|-----------------------|------------------------|
| Yes      | 20                    | 40                     |
| No       | 30                    | 60                     |

The functionality of the toilets refers to whether the toilets were always working or not and this depended on whether they were clean or not and whether they had been serviced by the municipality or the private company. 60% of the respondents said that the toilets were not always functional because they were not serviced weekly as they were supposed to be, while 40% said that the toilets were always functional. The 40% that said the toilets were always functional were the people who had an agreement as a group in terms of sharing a toilet and they locked the toilet with a padlock thereby keeping it clean.

#### **4.5.1. Problems encountered with bucket system**

The community faces some problems with regards to the toilet system they are using. The smell that comes from these toilets is bad especially when they have not been serviced when due. The buckets are supposed to be serviced on Mondays or Fridays, and sometimes the municipality services the toilets any time of the week. If the buckets are not serviced it can take up to two weeks without them being serviced. One of the issues the respondents mentioned was the if any of the community members complains to the people collecting the buckets, these people take the bucket and throw it to who so ever that is complaining and go away.

In summer the worms coming from the toilets spread around and the smell makes it difficult for the people to even sit outside their houses. The flies also will be everywhere because of the smell. The dogs also come and spread all the dirt/faeces that are inside the toilets outside each time the municipality does not fetch the buckets. This makes the areas dirty and smelling. The hired green buckets toilets belong to a private company (the name of the company is Omega), which is also supposed to come each week to collect the buckets. The people who use the hired toilets have a responsibility for calling the company if they see that the buckets have not been fetched so that they come and collect the buckets. Municipality does not service the hired bucket toilets. The hired toilets sometimes fall when there is too much wind and all the dirt will then be scattered out, sometimes very close to the houses. Some respondents mentioned that they did not have problems with the toilets because it's only their household or group that uses the toilets. One of the parents mentioned that one of her children once experienced a running stomach and had a rash on her thighs due to the unhygienic toilets. They mentioned that from time to time, children experience some health problem, if it's not running stomach, then it could be a rash or pimples on their bodies, etc.

#### 4.5.2. Minimum adequate human disposal

The respondents said that the adequate minimal waste disposal system that the Walmer Township residents wanted are toilets that flush, located within their yards and those that can only be used by their family members. Also they wanted a toilet that is built with a good and enclosed structure. They mentioned that sharing a toilet is the most uncomfortable and undignifying thing as people are different and others are not that clean. The current system is unhygienic and sometimes it is very difficult for the children to go and use the toilets because they are not clean most of the time. One of the respondents mentioned that she does not even allow her child to go to the toilet, rather she lets her do everything in the house using a bucket then she later goes and tips everything into the outside toilet. The toilets are also not hygienic as some people use them for sexual activities, especially when they are drunk.

#### 4.5.3. Municipal services

**Table 6:** Services that Municipality provide

| Response           | Number of respondents | % of the responses |
|--------------------|-----------------------|--------------------|
| Nothing            | 40                    | 80                 |
| Water & sanitation | 0                     | 0                  |
| Electricity        | 10                    | 20                 |

80% of the respondents mentioned that the municipality was doing nothing for them while 20% said that the only thing the municipality did was to give them electricity. One of the major issues that the community had against the municipality was the provision of houses. Residents mentioned that promises had been made in the past but nothing has been done since and they were tired of waiting hence they go on public protest sometimes over such issues. They mentioned that even the electricity that they were using was not well secured because the wires hang all over and there had been incidents whereby kids had been burnt by the exposed electrical wires. It was pointed out the Township's main issue was not water. The community gets enough and clean water, the major issue was the toilet systems and human waste disposal systems they are using which is unhygienic, undignified and grossly dehumanising. The respondents mentioned that they would like the municipality to provide

them with good sanitation infrastructure and flushing toilets and also water that is within their yards.

#### **4.6. Summary of the Findings Based on Data Collected from Municipal officials**

Some questions were posed to municipal officials as well as the councilor for the study area – Walmer Township. The findings below are from one of the municipal officials who is responsible for water and sanitation infrastructure in the Nelson Mandela Bay Municipality

##### **4.6.1. What water services is the Municipality required to provide to the community of Walmer Township?**

It was indicated that the municipality is required and does provide two types of services to the Walmer community. The first type of service is piped individual metered water connection to formal households. The second type and level of service is water services to informal dwellers. For the latter, the municipality is supposed to provide standpipes at a radius of 200 m walking distance from each household.

##### **4.6.2. What human waste disposal services is the Municipality required to provide to the community of Walmer Township?**

Formal houses are serviced with water central sanitation systems, while the community that lives in informal dwellings is supposed to be serviced with the bucket sanitation system. Although the official mentioned that the municipal buckets are serviced he did not state when and how many times a week or a month. Although the municipality also contracts the company that provides some of the buckets and is supposed to service these as required under the contract, the official was not clear whether the company efficiently fulfils its contractual obligations. It was also not clear who is responsible within the municipality in terms of managing the contractual services and ensuring that the private company is fulfilling its contractual obligations.

##### **4.6.3. What is the minimum daily entitlement for water per person per day constitutionally?**

- The official stated that everyone in South Africa is entitled to a certain minimum amount of water per day, which is 25L per person per day as free basic water. In the case of

Walmer Township it was mentioned that the municipality provides water to indigents as part of daily minimum volume of free basic water policy. The minimum amount of per indigent is 6 Kl per person per day; the NMBM provides 8 kl per person per day as part of free basic water, which is therefore higher than the minimum requirement.

- **Is NMBM meeting these requirements?** – In terms of the municipality meeting the minimum entitlement, the official said yes the indigents were registered and received the minimum entitled free basic water
- **If yes, how?** The Official said that water was metered to formal dwellings while indigents are not billed

#### **4.6.4. Is there a minimum requirement for provision of sanitation for communities that NMBM is required to meet?**

- **If yes, what is the minimum requirement?** -The Official stated that these were - Containers and dignified sanitation and would fulfil the minimum required sanitation for communities in Walmer Township

The official further said that the municipality was in the process of eradicating the bucket system and replacing it with container ablution blocks which are more dignified than bucket system.

The official argued that some of the residents had built the informal dwellings in areas and places where there is nothing that can be done for them by the municipality, and in fact they were warned about this before moving to those areas. For example areas such as Egisini (meaning ‘gas’), which is an area known to have gas underground and is not designated as appropriate for human settlement. Another inappropriate area is Esporweni (meaning ‘Train sport’), which belongs to Transnet.

#### **4.7. Summary of the Findings Based on Data Collected from the Ward Councilor of Walmer Township.**

The findings below are from an interview with one of the ward councilors for Walmer Township.

**4.7.1. What water services is the Municipality required to supply for the community of Walmer Township?**

The councilor mentioned that the municipality does provide for the community of Walmer. The water and electricity that they have is being provided by the municipality and each street has a stand point pipe.

**4.7.2. What human waste disposal services is the Municipality required supplying for the community of Walmer Township?**

Walmer is an area that has both formal and informal houses and the formal houses use flushed toilets while the informal houses use the bucket system. The municipality provides the buckets for the people and the buckets are supposed to be collected every week so that people can have clean toilets.

**4.7.3. What is the minimum daily entitlement for water per person per day constitutionally?**

The councilor said that people get water according to the way they should be getting constitutionally. The councilor did not dwell on this question and he did not even mention the liters that are supposed to get constitutionally.

- **Is NMBM meeting these requirements?** – The municipality meets the requirements as people get water throughout and they get the water free.

**If yes, how?** Water is metered to formal houses, while indigents are not billed.

**4.7.4. Is there a minimum requirement for sanitation provision for communities that NMBM is required to meet?**

- **If yes, what is the minimum requirement?** -Good structures of toilets built with bricks where one is safe inside.

The councilor said that the municipality is in the process of eradicating the bucket system and will be putting in place flushed toilets that are built with blocks so that people can be happy and have clean toilets.

#### **4.8. Focus Group Discussions**

The student was able to get a group of people from the community to discuss the issues of service delivery in the area. The number of people in the group was eight; five females and three males who happened to be where the discussion was held. Other males who were there excused themselves. The group mentioned a number of issues and that their voices were not being heard because they had been asking the municipality to give them better service delivery for a long time. Group members said that in rural areas where they come from, people think that we are living a nice and comfortable life in Port Elizabeth, yet this was not really the case. The issue of bucket toilets was the biggest concern. One of the members mentioned that she does not even use the toilets in the Township anymore because of their condition, and that the only time she uses a toilet was when she is at her work place. She indicated that during weekends she tries by all means not to go to the toilet till Monday when she is back at work. They stated that by protesting they want their voices to be heard so that the government can do something about these inhuman sanitary conditions. The issues that they have are not only water and sanitation, but the housing was also an issue, the electricity that has exposed wires that fly all over is also an issue. The group pointed out that the ward councilors that they have had before did nothing, except one previous one who tried his best to do a lot of things for the community by pushing for better service delivery. During his time, the municipality would come to collect the buckets every week, even though they delayed sometimes. They pointed out that it was so unfortunately that the ward councilor in question was murdered in his home and since then things have been not been good for the community.

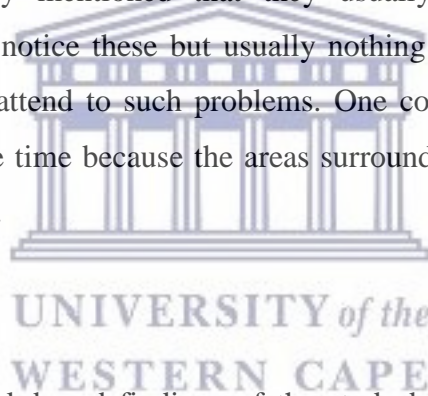
Some group members mentioned that there were some cases whereby children had been burnt by exposed electrical wires on the roads and had died. In most instances, people in informal dwellings have to ask from the nearby formal houses to connect their electrical extensions so that they can have electricity. In such cases, they have to pay the owner of the house for the source of the electricity. The constant power cuts due overload sometimes burn their appliances. Thus the main issues in Walmer Township were sanitation, housing and electricity. Water was not viewed as the major issue by the group because it is always available and it is free.



#### **4.9. Observations by student**

While the student was in the study area she noticed a number of things about the area. The conditions in which the community members live in are poor. In most cases, they cannot move to any other place or build a proper structure other than a shack. Many of the people were unemployed and could not afford basic needs. Alcohol abuse was very high in the area as people got drunk from morning till sunset. Most toilets were not in good condition and in some cases one could see from outside if there was someone inside the toilet. The proximity of the toilets to the houses is usually very close, which is not good as the smell from the toilets was very strong since people were using the toilets all the time.

Some of the taps had leaks and children played around these leaking taps. Interviewees said that every day on the radio there were announcements which said that NMBM has scarce water and dams were very low, so people needed to use water wisely and report the leaks immediately. The community mentioned that they usually reported the leaks to the municipality as soon as they notice these but usually nothing was usually done or it takes time for the Municipality to attend to such problems. One could observe that some of the leaks had been there for some time because the areas surrounding these were flooded, were marshy and the taps had algae.



#### **4.10. Conclusions**

Chapter provides the fieldwork-based findings of the study by the student. The study was undertaken in Walmer Township in NMBM. The results have been presented in form of pie charts, bar graphs and tables. The represented results using each of these formats have been analysed immediately following the figure and table depiction. The empirical results and findings from the study are in relation to the following issues and research questions: the characteristics of the sample population; the gender proportions of people that are responsible for fetching water in Walmer Township, especially from public sources such as public taps; Education levels of the sample population; employment status of the sample population; proportion of people with regular income and the levels of such income; the main uses for the water; source of water, that is where households get or collect their water; volumes of water that are used by each sample household; the levels of satisfaction with the quality of the water being provided; whether people experience shortages of water; options or modes of human waste disposal for the interviewed households; maximum distance from nearest public toilet

for those households using public toilets; average number of people per public toilet; the functionality of public toilets; problems and issues with use of bucket toilet systems; opinions and views by municipal and political representatives (councilors) on the role and mandate of the municipality on provision of water and sanitation for Wamer Township and whether this is being fulfilled; and perceptions of the community representatives (interviews) on municipal service provision for water and sanitation.



## **5. CHAPTER FIVE: WATER AND SANITATION DELIVERY IN WALMER TOWNSHIP: CHALLENGES AND UNDERLYING FACTORS**

### **5.1. Quantity and quality of available water to Walmer residents**

The community members said that the quantity of water that they get is generally enough for their daily requirements and that the amount of water that they fetch is according to the size of the household. Given that the average number of people per household is 10, most households use far less water than the minimum (25 liters per person per day) required since 40% of the households used between 66 and 75 liters of water per day while over 90% used between 36 to 75 liters per day ( see figure 12). One of the reasons for this low usage is the distance people have to walk to fetch the water. Most households are more than the stipulated 200m from their nearest public stand tap. Thus, members the households mentioned that if they had taps within their households, they could use more water than what they are actually using now. They said that carrying a bucket of water from the tap is very tiring and at times even if they needed more water they cannot get it because of the distance to the nearest stand point tap. The distance to the public stand taps makes it unsafe at night especially for children and for the elderly to go alone. These practical limits on the amount of water that households can fetch also impacts on the hygiene of people as they have to economise on water use even for bathing, hand washing after toilet and other water related health habits.

Generally, the water is always available (see table 3), unless there is a burst pipe to a tap or taps and the municipality has to come and fix the problem. Although the municipality usually comes quickly to fix such problems once these have been reported, there are times when it takes time to fix problems. Majority of the residents are very happy and satisfied with quality of water that they are getting (see table 2). Some complained that when there have been a burst pipe, there are situations when the first volumes of water after repair of a burst pipe is not clean. One solution to this problem of dirty water soon after a burst pipe has been fixed could be that the municipality should explain to the members what they should expect after such repairs to pipes have been done.

Section 27(1) (b) of the Bill of Rights provides that “everyone has the right to have access to sufficient water”, and section 27(2) obliges the state to “take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation” of everyone’s right of access to sufficient water. Although people in the Walmer community said that they

had access to sufficient quantity of water for their daily use and that the quality of the water was fine the practical reality is that most households use less than the daily minimum per person due the distance where they have to fetch the water. Most households are further than the minimum 200m from their nearest public stand tap, which affects the amount of water that can fetch and as a result the amount they can use. There is need therefore for municipality to provide more stand pipes than currently available so as to reduce the distance that most households have to walk to fetch water

## **5.2.Status and the challenges of sanitation and hygiene**

According to WIN-SA (2013) the bucket system is considered to be one of the worst sanitation system ever because it violates the human dignity for the users as well as those responsible for the collection and disposal of human waste from bucket toilets. The bucket system is considered by many people as the most unhygienic and very expensive to maintain. One of the reasons the bucket system persists in most informal settlements has not been eradicated yet is the unplanned development of informal settlements and the type of dwellings (mostly shacks) that people used in these settlements. In addition, such settlements grow and mushroom organically as more and more people influx into these areas from rural areas or other urban areas looking for jobs or better economic opportunities. For example, settlements such Gesini and Sporweni which Walmer Township had been started and developed illegally by people on their own in environments where they were not supposed to be built. The former is on grounds under which there is natural gas while the latter is in an area for a railway line. Most dwellings in such areas are not suitable for provision of inside water taps and toilets. Because of this it has become very difficult for the municipalities plan for and provides services for such areas. Because Municipality only comes in later after most of these settlements have been developed, its becomes difficult to provide infrastructure such as service roads, water, electricity, etc. As a result 80% of residents in Walmer still use the bucket system (see figure 14) and the in migration and influx of people is still continuing as more and more people continue coming looking for better opportunities in the city of Port Elizabeth.

The impact that the bucket system has on the residents is bad because it affects their daily hygiene. The buckets are at times not being collected as scheduled, which results in an unhealthy environment whereby one can find masses of human waste outside the toilets.

When this happens dogs make things worse as they drag the waste all over the place out on the streets while feeding on the waste. The smell of uncollected human waste coming from full bucket toilets during summer days can be extremely bad to the extent that it makes it difficult for the people to sit outside their houses. Also there will be flies all over as a result of the exposed waste and smell.

There are many informal communities in South Africa that still use the bucket system and municipality are struggling to do away with these. These challenges also affect the Nelson Mandela Bay Municipality. WIN-SA (2013) pointed out the following issues as ones that affect the development of proper sanitation:

- **Securing adequate funds for the Bucket Eradicating Programme (BEP).**

National bucket eradicating funds was limited to pre 1994 buckets in informal settlements or townships, thus municipalities with little or limited resources and funds are struggling to eradicate all post 1994 buckets.

- **Affordability of waterborne sanitation services for the poor.**

Poor and smaller municipalities were concerned about the financial sustainability of waterborne sanitation services due to the majority of Bucket Eradicating Programme (BEP) beneficiaries being indigents who could not afford to pay were not paying for the sanitation services. This is also the situation to Walmer Township because people do not pay for any sanitation or water services because they cannot afford to.

- **Lack of funds to build new Waste Water Treatment Works (WWTW).**

Municipalities that have little or limited funds struggle to secure funds for upgrading new WWTW.

Other challenges were the fact that sanitation was not given a priority before 1994 then water services were the priority. Local government frequently does not have the capacity to deal with sanitation problems especially in peri-urban settlements where it is needed mostly. National Sanitation Strategy (2005:37) stated that some of the municipalities do not even have the updated water service development plans as required in terms of the Water Service Act of 1997.

The location of each bucket toilet differs from house to house, some of the residents do not have to walk a distance to use the nearest toilet, while some have to walk a distance. Figure 10 provides an idea of these distances. This is what makes some of the people to not even go to the toilet especially at night. It is also not safe to let children or the elderly go to such toilets unsupervised. The fact the public bucket toilets are outside houses, let alone the distance some have walk just to get to one can be dangerous especially at night. From the observations if one walks around the Walmer Township, one can actually see faeces and papers with faeces on the roads next to houses, which is very unhygienic. It is very problematic for small kids to play around and see these kinds of wastes. In many cases the people who use the streets as toilets usually do not to wash their hands thereafter. Another reason that household members used toilets that are more 20m away from their homes is because sometimes the nearby toilets were being used by others, and thus had no choice but to walk a distance to get an available public toilet. In other cases, they used distant toilets because the nearby toilets were full and/or dirty and could thus not be used till they had been serviced. Looking at this situation the privacy of people is demeaned. Section 14 of the Constitution states that “everyone has the right to privacy”, and Section 10 of the constitution highlights the importance of human dignity, providing that “everyone has inherent dignity and the right to have their dignity respected and protected.” There is a clear boundary between sanitation and dignity, as being forced to discharge oneself in unhygienic, inadequate toilet facilities impairs dignity.

Also unfortunate is that currently, there are now clear arrangements around management of the hygiene, maintenance and cleaning of the toilets. The bucket toilets are essentially public toilets available for everyone’s use. The municipality (responsible for 80% of the bucket toilets) and the private company (responsible for 20% of the toilets) are supposed maintain and empty the toilets at least to once a week. If the toilets fill up before the scheduled day of the week when they have to be emptied, the community members affected are supposed to report to the ward committee, which can then summon the municipality or the private company to come and empty the toilets. The observation is that while the private company is more consistent and diligent in coming to empty the toilets and maintaining them, the Municipality does not show up to come and empty the toilets as scheduled and can in fact take up to two weeks without coming. In such cases the toilets can overflow resulting in the toilets becoming unusable, unhygienic and a potential source of disease and infection. The

issue of the municipality not collecting the buckets on time as required has become a problem in the community, and one of the issues that has led to community protest a number of times. This is also the reason most people would prefer that a private company should be responsible for maintenance and collection of buckets (just like Omega is responsible for 20% of the toilets) because they collect the buckets on time as required and if the buckets are full before the actual scheduled collection day of the week, they always come to collect to avoid the protest against them. For the municipality this has created a bad reputation for them in the community. Politically the African National Congress (ANC) lost the Walmer Township Ward to the Democratic Alliance (DA) as residents switched to the latter as a result of dissatisfaction with service delivery.

In some instances, some households take it upon themselves to arrange use of specific toilets among only themselves, in which case they fix a lock on the toilet door and keep the toilet locked, thereby privatizing the use among these households members only. In such cases, they can also agree on responsibilities for cleaning and maintaining the toilet. In such cases, the toilets tend to be cleaner and better maintained.

The sheer number of people that use each toilet (an average of over 80 people per toilet – see table 4) makes it extremely difficult to maintain the toilets clean and in functional and usable state all the time. If one assumed that the national average household size in South Africa is 4 (the average household size in 2016 was put at 3.3 (<https://www.arcgis.com/home/item.html>)) and this is the average number of people that use each inside toilet nationally, this means that the average number of people per bucket toilet in Walmer Township is 20 twenty times more than the national average.

### **5.3. Economic, social and cultural factors influencing water and sanitation delivery**

The continuing influx of people into the Walmer Township has led to very high population density for the Township, with the average number of people per household being ten, which is three times the national average of 3.3 people per household (<https://www.arcgis.com/home/item.html>). Members of a typical household include relatives from the rural areas who came to look for jobs in the city, the children of the house owner, and grandchildren (some children had children of their own). It is very common therefore to find at least three generations of relatives living in a single household. In many of these

households most of employment age members of the household are unemployed. Most of the households depend on social grant money (child and pension). The proportion of unemployed household members in the Township was 60%, which is more than twice the national rate of unemployment which was 27.5% in the third quarter of 2018 according to Trading Economics (2018) (<https://tradingeconomics.com/south-africa/unemployment-rate>). As Stats SA (2018) pointed out the burden of unemployment in South Africa is concentrated amongst the youth who account for 63.5% of the unemployed citizens. Because of the high unemployment among youth in Walmer Township the crime rate, drugs and alcohol abuse are high.

Given the high unemployment rate and dependency on social grants by most households in Walmer Township, most households and the community at large can hardly afford to pay for basic needs and amenities such water, private toilets, electricity, etc. They depend on local government (the Municipality in this case) to provide them with these. In most instances the community cannot even afford to repair or fix the provided amenities such as public stand pipes (most of them were leaking) and public toilets. They have to report such cases to the Municipality or to the private company that has been contract services (for example Omega which is contracted to provide, maintain and empty 20% of the bucket toilets). Thus you have situations whereby taps continue to leak and lose water or burst pipes which can take than a year to fix because of the municipality does not have the capacity to attend to these instantly.

Because of limited space and the distance that people have to go to fetch water, many if not all, households in Walmer Township do not have gardens that could help save them some money through growing their own vegetables. Thus most households use the water for domestic purposes only such as cooking, bathing, cleaning and cleaning clothes. Almost no water is used for economic activities such as growing vegetables. The lack of space also meant that it is not possible to keep and raise chicken, ducks, goats, etc. Thus most households in the Township have to buy all their food.

#### **5.4. Management and governance of service delivery for Walmer Township**

As noted in the previous section, the majority of the population of Walmer Township depend on basic services provided by the Municipality. These include water, bucket toilets, electricity and infrastructure such as roads. Although people feel that the quality and quantity

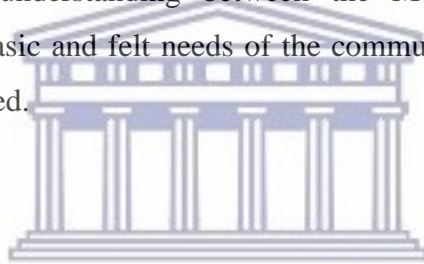


of water being provided are not a problem (the only problem is that most households are now more than 200m from their nearest public stand tap), most people are very unhappy about the bucket toilets – these are not enough (an average of over 80 people per toilet), and also those that belong to the municipality are poorly maintained and inadequately serviced in terms of being emptied on time routinely or when required. One of the consequences of the inadequate number of toilets is that these fill up quickly, thereby requiring that the service providers (whether the municipality or contracted company) come to empty and service them immediately instead of waiting for the scheduled day of the week. Although the service and response to community requests is better by the private company (which is responsible for 20% of the toilets), the same cannot be said with the municipality which is responsible for most of the toilets (80%). Just like in the rest of South Africa, service delivery protests in Walmer, especially over the bucket toilets, have become frequent. Protests inevitably lead to destruction of property and violence and in some cases to death (for example the case of Keiskammahoek where some men were killed during service delivery protests by community members). Section 152 (1) (b) of the constitution states that the mandate of the municipality is “to ensure the provision of services to communities in a sustainable manner”. As the municipalities are the third and lowest tier of government, they are supposed and required to work closely with communities in fulfilling such constitutional obligations and mandates. This does not seem to be the case with Walmer where community members felt that the municipality has not fulfilled its promises of providing housing (which could be ideal for private inside water taps and toilets), adequate public toilets (there is promise to build blocks of public flush toilets) and adequate public stand taps (so that every household is within 200m of a tap).

The water (stand taps by the side of the streets) and the bucket toilets are provided as public toilets for use of the Walmer community. The problem though is that among the Walmer community, these are open access – that is anyone can fetch water from any tap within Walmer and anyone can use any of the public toilets in Walmer. This has resulted in poor management of and poor maintenance of these public amenities (what is available to everyone belong to no one). The unhygienic state of most of these toilets and the poor state of water stand taps (leaking and uncared for surroundings) are as a result of this type of management arrangement. It would probably improve the situation if specific number of households were located a stand tap and bucket toilet – to limit access and use to these households only. These would then be responsible for maintaining and managing use of the

tap and/or toilet. Although there are water point committees within Walmer which are supposed to be responsible for managing the public stand taps, this does not include limiting who can use the tap that they are managing. The Committee's responsibility is mainly to alert the municipality when there is a problem so that the Municipality can come and fix the problem. The key principle should be allocating usage and management of specific taps and/or toilets to specified households – that these should limit use to of the tap and toilet only to these households and make arrangements among themselves in terms for cleaning, locking and possibly doable maintenance of the amenities. Even the planned block toilets would work best based on such a management arrangement

The foregoing point to the fact that at the moment, there is no participatory planning and management of the public amenities and services being provided by the Municipality together with the communities. Decisions are largely being taken top down by the Municipality, resulting in disjuncture in understanding between the Municipality and the Walmer Community in terms of the basic and felt needs of the community and how these should be provided, serviced and managed.



## **5.5. Conclusion**

This chapter discusses the key findings of the study under four themes, namely: Quantity and quality of available water; sanitation and hygiene; economic, social and cultural factors influencing water and sanitation delivery; and management and governance of service delivery. The conclusions from the findings are as follows:

People in the Walmer community felt that they had access to sufficient quantity of water for their daily use and that the quality of the water was fine. The reality though was that most households use less than the daily minimum amount of water per person as required in the constitution, mainly because the distance where they have to fetch the water is too far to collect more water than they absolutely need. That is, most households are further than the minimum 200m from their nearest public stand tap, which affects the amount of water that they ably fetch and as such the amount they can use daily. There is need therefore for municipality to provide more stand pipes than triose that are currently available in order to reduce the maximum distance that most households have to walk to fetch water to less than 200m for all households.

80% of residents in the Township still use the bucket system. This is the issue that the community is more aggrieved about. One of the reasons the bucket system persists in Walmer Township (and in most informal settlements in South Africa) and has not been eradicated yet is the unplanned development of informal settlements and the type of dwellings (mostly shacks) that people still use in these settlements. In addition, such settlements grow and mushroom organically due to the constant influx of people into the Townships from rural areas or other urban areas as people look for better economic opportunities. This makes it very difficult for the municipalities to plan for and provide services and infrastructure for such areas, as the Municipality only comes in later after most of these settlements have been developed or is always playing catch-up. Worse still, the average number of people that use each bucket toilet (over 80) makes it extremely difficult to maintain the toilets clean and in functional and usable state at all times. Another problem is that the buckets are not usually collected as scheduled, especially those that are under the management of the municipality which are by far the majority (80%). Also currently, there are no clear arrangements around management of the hygiene, maintenance and cleaning of the bucket toilets. The bucket toilets are essentially public toilets available for everyone's use. Therefore the impact that the bucket system has on the residents' health and hygiene, and the general environment of the Township is very bad and unhealthy.

The continuing influx of people into Walmer Township has led to very high population density, with the average number of people per household up to ten (three times the national average of 3.3 people per household). People of working age in these households are unemployed (60%, which is twice the national rate of unemployment which was 27.5% 2018). The result is that most households in the Township depend on social grants for survival. The high unemployment rate and dependency on social grants by most households in Walmer Township means that the community cannot afford to pay for services and therefore depend on amenities provided by the Municipality. The lack of space where households can practice backyard gardening and the long distance where they have to fetch water means that most people do not grow vegetables around their dwellings. The lack of space also means that it is not possible to keep and raise chicken, ducks, goats, etc. Thus most households in the Township have to buy all their food instead of trying to reduce expenses on food through such livelihood activities.

As indicated in the preceding paragraph, the majority of the population of Walmer Township depends on basic services provided by the Municipality, including water, bucket toilets, electricity and infrastructure. These are provided as public amenities available to all Walmer residents, thereby making them largely 'open access'. This has resulted in poor management and poor maintenance of these amenities since 'what is available to everyone belongs to no one'. The unhygienic state of most of the bucket toilets and the poor state of water stand taps is as a result of this current management arrangement. Although there are water point committees, which are supposed to be responsible for managing the public stand taps, this does not include limiting who can use the tap that they are managing. Some households have also taken charge of specific bucket toilets and limit who can use them by locking them. It would certainly improve management of these public amenities if a system of locating stand taps and bucket toilets to specific households that could limit access and use to these defined groups of households was introduced. These households would then be responsible for maintaining and managing use of the specific and allocated stand taps and/or bucket toilets. Even the planned block toilets would work best if their management was based in such an arrangement. The current management arrangements for these public amenities point to the fact that there is currently lack of participatory planning and management between the Municipality and the community. Decisions are largely being taken top down by the Municipality, resulting in dissonance between the Municipality and the Walmer Community regarding the basic and felt needs of the community, how these should be provided, serviced and managed.

## 6. CHAPTER SIX: CONCLUSIONS AND RECOMMENDATIONS

### 6.1. Key Conclusions of the study

Walmer Township faces challenges when it comes to Water, Sanitation and Hygiene. A lot needs to be done to provide minimum standards of sanitation and water infrastructure and delivery systems. This is because of the unplanned growth of the township due to influx of people from rural and other areas seeking better economic opportunities. Government has been slow in terms of development and construction of formal housing for the Walmer community. Shacks have mushroomed, and these cannot be have inside toilets and water resulting in the need to provide communal toilets and water. As a result, Walmer Township continues to use the bucket system for human wastes disposal. 1.4 million (37%) households in South Africa have no access to sanitation services compared to 3.8 million households that have been given access. According to the Report on the status of sanitation services in South Africa (2012) the problem of inadequate sanitation is both a human rights and development issue and failure to provide adequate and functional sanitation has calamitous negative impacts on the health and social wellbeing of communities. This is currently the case with the Walmer community. The poor planning across government from a strategic level right down to the micro level as well as inadequate resources for both the capital costs as well as on-going maintenance costs are some of the root causes of failure with regards to sanitation service delivery. The NMBM is suffering from similar problems resulting in poor service delivery for communities such as Walmer.

For a crowded and highly dense community such as Walmer, it is difficult for the Municipality to build infrastructure such as roads, which are also important for access for human waste and refuse collection and policing. Planning and building water and sewage systems has become very difficult if not possible due to the unplanned and illegal construction of informal dwellings that has happened and continues to happen. Looking at the servicing of the bucket system, this is very poor and inadequate. The major issue is the inefficiency of the municipality and also in some instances poor management of sub-contracted service providers. The result has been uncollected waste (both human and refuse) as per weekly schedules which results in terrible smell and stench and potential dangers of diseases and infections. Burst unrepaired pipes and poor roads that are hazardous especially during the rainy season are another issue. Poor or lack of street lighting abates crime especially at night.

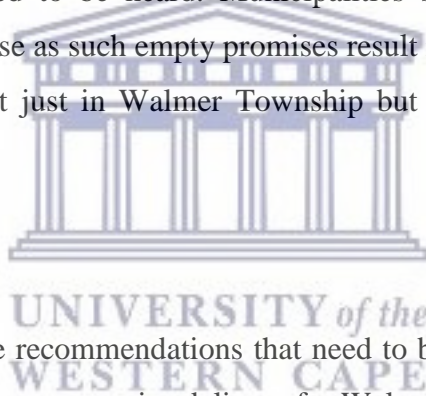
All these have huge negative impact on the hygiene and quality of life of the Walmer Township community.

The water quality is relatively fine and quantity is adequate. The problem is that as the Township has grown, most of the households are further than the stipulated requirement of being within 200m from the nearest stand tap. The management of communal taps and toilets leaves a lot to be desired as these are currently largely open access. There is need to introduce limited and controlled access for both stand taps and in particular toilets. Because of high unemployment levels, low education achievements and low wages and earning capabilities of most of the population, most households cannot afford to pay for services. This means that most expect and rely on government services (housing, water, sanitation infrastructure development and maintenance, etc.). Inadequate human capacity, skills as well as finances or budget allocations for servicing townships makes it difficult for the Municipality to fulfil its mandate to the Walmer community. This has resulted in backlog in infrastructure and service provision.

The objectives of the study were to investigate the quantity and quality of water supply in Walmer Township and how these affects sanitation and hygiene in the community. The study shows that the people Walmer face some huge problems with regard to water and sanitation, particularly the latter. In the post-apartheid era South African municipalities were recreated and mandated to provide services to improve the quality of life for communities. The services that Municipalities are required to provide included the provision of social amenities such as water, electricity and infrastructure (for instance access roads) and sanitation. Currently most municipalities are facing huge human capacity and budgetary challenges for provision and sustenance of service delivery. Social protests are growing due to lack of or inadequate service delivery. The issues around people resorting to protest, from the literature, is as a result of grievances and hence are covered by the 'grievance theories', which include relative deprivation, social injustice, and frustration-aggression, among others. The bucket system which was supposed to have been eradicated by the end of the Mbeki presidency ([www.dirco.gov.za/docs/speeches/2006/mbek0203.htm](http://www.dirco.gov.za/docs/speeches/2006/mbek0203.htm)) is still in use in most informal communities and in Walmer Township it remains the main system for human waste disposal. This has been and remains a major grievance against the Municipality by the Community.

Poor sanitation can promote the spread of preventable diseases such as diarrhea and cholera. This can weaken the immune system of HIV positive people and has a major impact on the quality of life of people living with AIDS (HIV/AIDS is said to be a common problem in Walmer Town - <http://www.izizweprojects.co.za/about/walmer-township/>). Another issue is that when people are sick from such diseases, it becomes difficult to nurse them when there are no nearby, easily reachable and functional toilets and water. The study findings are that people in Walmer have experienced some health problems because of poor sanitation, especially children, which has resulted in them abandoning the use of the bucket toilets..

Comprehensive intervention strategies are needed to overcome these unacceptable water and sanitation problems in Walmer Township. Local (Government) needs to ensure that all South African citizens have access to basic water needs and proper sanitation services as mandated by the constitution of the country. The poor have also got rights as they are citizens of the country, and their voices need to be heard. Municipalities should not just keep making promises without fulfilling these as such empty promises result in social protests like the ones that continue taking place not just in Walmer Township but also in different parts of the country.



## **6.2. Recommendations**

The following are some of the recommendations that need to be taken into consideration by the Municipality in order to improve service delivery for Walmer Township.

- a) ***Planned development of Walmer Township:*** One the key problems that have caused water and sanitation inadequacy has been the unplanned development of Walmer Township. The infrastructure and the water systems that had been built were never meant for the current population (70,000) which continues to increase. There is need to put a stop on the influx of more and more people into the Township and also enforcement of planning regulations so that the Municipality can plan for the provision of infrastructure and amenities. For example, one of the solutions to the current bucket toilet system is the construction of RDP houses that can have private inside toilets and water. As things stand, shacks would have to be demolished (and make people homeless) in order to construct houses, water and sewage systems, and access roads.

- b) ***Improving Walmer's sanitation coverage***- There is need to provide adequate water and sanitation facilities for Walmer Township residents, since it is clear that currently, there is a huge backlog in, for example toilets. To overcome the backlogs and obstacles in improving the sanitation of the township will need policy initiatives and increased funding. With enough funds, the Municipality could be able to construct improved flush toilet systems as outlined in the Municipality's IDP.
- c) ***Resilient institutional performance***- Adequate human resources capacity for planning and management of water and sanitation are needed and also strong coordination, clear roles as well as responsibilities among government institutions. Unclear roles and accountabilities create a circumstance whereby water and sanitation does not get the desired attention by all relevant spheres of government.
- c) ***Sustainable financing strategy for service delivery*** – Local government service delivery financing strategy that is sustainable is crucial and important, as this will hopefully create an increase in resource allocations for water and sanitation sector. This will hopefully make things such as infrastructure development move faster.
- d) ***Community participation in municipal processes***: There is need to provide opportunities for community members to participate in planning, implementation, feedback and other processes that affect them. It is suggested that the community-based planning processes be utilized to guarantee that community members are part of all plans at stages of these. Participation of community members needs to be institutionalized in order to ensure community buy-in for all projects that are to be implemented in the community such as the issues of water and sanitation. The participation should be premised on the rights of communities to determine their own tomorrow. In this context, the community should be given every opportunity to express their felt needs, opinions and feelings without resorting to social protest, let alone violence. More important is that when they express their needs, opinions and feelings these should be heard and attended.
- e) ***Sensitization of community members on complaint processes***: It is recommended that the municipality accelerates the sensitization programme regarding the complaints management system. The ward structures of the area in the complaint process should be



well explained, the timing of feedback, the appropriate office for complaint resolution and the mechanisms of the complaint resolution processes should be properly clarified.

*f) User-based management arrangements:* Currently, water stand taps and bucket toilets appear to be open access to all members of the Walmer community (and other visitors from outside Walmer such as those coming to drink at Shebeens and Taverns). This has resulted in very bad and unhygienic toilets and poor maintenance of the stand taps. In order to improve management and maintenance of the toilets (in particular) and also stand water taps, these should be allocated to specific households that limit access to only those households (for example by keeping the toilets locked) and make arrangements to clear and maintain the amenities among the members of households that have exclusive access and usage. This will improve the hygiene and maintenance of these amenities.

*g) Improved capabilities to pay for services:* An indirect issue, not limited to Walmer is the current severe problem of the majority of the South African working age population not being able to pay for services as a result of unemployment and reliance on social grants. Until this problem is overcome, most people will continue to rely on services provided by the local government (Municipalities). In most instances, these people end up in informal settlements where Municipalities are already under immense pressure to provide infrastructure and services. The growth of the economy and creation of employment is therefore critical for overcoming some of the water and sanitation problems such as those inherent in Walmer Township.

## REFERENCES

- Afonso-Gallegos, L., N. Bekele-Thomas, H. Dayal, D. de Jongh, W. Fourie, N. Mkhize, J. Muller, A. Schaefer. (2018) *Implementing the Sustainable Development Goals in South Africa: Challenges and opportunities*. University of Pretoria: South Africa
- Anderson, J.E. (1997). *'Policy-makers and their environment'*. *Public policymaking*. Boston: Houghton Mifflin Company: 47-90.
- Annamraju, S., Calaguas, B. & Gutierrez. (2001). *Financing water and Sanitation, Key issues in increasing resources to the water sector*. [Online]. Available <http://www.oecd.org/dataoecd/13/55/2552051.pdf>
- Arnstein, S. (1969). *A ladder of citizen participation*. *Publication Journal of the American Institute of Planners*, Vol. 35 [Online]. Available <http://lithgow-schmidt.dk/sherry-arnstein/ladderof-participation-citizen-participation.html>.
- Ashwell, A. & Hoffman, T. (2001). *Nature Divided Land Degradation in South Africa*.
- Ayres, R. (ed.). (1995). *Reader in development studies*. Greenwich University Press: Greenwich United Kingdom.
- Babbie, E., Mouton, J., Vorster, P. & Prozesky, B. (2001). *The Practice of Social Research*. Oxford University Press Southern Africa: Cape Town.
- Balint, P. (1999). *Drinking Water and Sanitation in the Developing World: The Miskito Coast of Nicaragua and Honduras as a Case Study* [Online]. Available <http://www.bvsde.paho.org/bvsacd/cd25/balint.pdf>
- Benington, J. (2009). *'Creating the public in order to create public value'*, *International Journal of Public Administration*, Vol. 32(3) :22-228.,

Berg, L. (2001). *Qualitative Research Methods for Social Sciences*. Allyn and Bacon: Boston.

Bond, P. (2011). *South Africa's 'rights culture' of water consumption* ( Chapter 33). In Johnston, B., Hiwasaki, L., Klaver, I.& Strang, V. (Eds), *Water, Cultural Diversity & Global Environmental Change: Emerging Trends, Sustainable Futures?* UNESCO. Paris. [Online] Available  
<http://ccs.ukzn.ac.za/files/bond%20unesco%20Culture%20of%20Water%20Rights.pdf>.

Butler, A., (2004). *Contemporary South Africa*, Palgrave Macmillan. Great Britain.

Cochran, C.L. & Malone, E.F., (2014). *Public policy: Representatives and choices*, Lynne Rienner. USA.

Cohen, R. & Kennedy, P., (2000). *Global sociology*, Basingstoke UK: Palgrave MacMillan

Dauids, I., Theron, F., Maphunye, J. & Kealeboga, J., (2009). *Participatory development in South Africa: A development management perspective*. Pretoria: Van Schaik.

De Beer, F. & Swanepoel, H., (1998). *Community development and beyond: Issues, structure, and procedure*. Pretoria: Van Schaik

Earle, A., Goldin, J.& Kgomotso, P., (2005). *Domestic Water Provision in the Democratic South Africa – changes and challenges. Nordic Africa Institute's Conflicting Forms of Citizenship Programme*.

Edwards, L., Fennell, M. & Massmann, J., (2007). *Mapping and Needs Assessment Rumphi Region, Malawi, Africa*. [Online].

Available [http://www.ncwater4people.org/WWC/Malawi\\_Final\\_Report.pdf](http://www.ncwater4people.org/WWC/Malawi_Final_Report.pdf)

Eureka Alert, (2015) *The global source for science news: Water covers 70 percent of earth's surface, but only a fraction is fresh*. [Online]. Available

[https://www.eurekaalert.org/pub\\_releases/2015-08/uosf-wc7082415.php](https://www.eurekaalert.org/pub_releases/2015-08/uosf-wc7082415.php)

Falkenmark, M. & Rockstrom, H., (2004). *Balancing water for humans and nature*, Earthscan: United Kingdom.

Fletcher, T., (2002). *Water Supply and Sanitation in India*. [Online]. Available : <http://www.tristanfletcher.co.uk/WaterSupply.pdf>

Fox, W. & Bayat, M.S., (2007). *A Guide to Managing Research*. Cape Town, Juta & Co. Ltd

Gleick, P., (1998). *Water in Crisis: Paths to sustainable water use. Ecological Application Vol.8(3) :571-579.*

Gormley, W. (1987). 'Institutional policy analysis: a critical review'. *Journal of Policy Analysis and Management*. Vol. 6(2) :153-169.

Goodman, L.D., & Van Norden, H. (2005). *Water, Sanitation and Hygiene education for schools*. UNICEF Roundtable meeting 24-26 January: Oxford, UK. (Quote from Kofi Annan at the 12<sup>th</sup> UN Commission on Sustainable Development, New York 28/04/ 2004

Graaff, J. & Venter, D., (2001). *Dependency theory, the world system, and systems thinking in development*. In Coetzee, K.J. , Graaff, J., Hendricks, F. & Wood, G. (eds.), *Development: Theory , Policy, and Practice* . Oxford University Press: Oxford United Kingdom.

Hall, et al. (2006), *Accommodating the poor: The Free Basic Water Policy and the Housing Subsidy Scheme*. Children's Institute.

Ham, C. & Hill, M., (1993). *The policy process in the modern capitalist state*. Harvester / Wheatsheaf: New York.

Hellum, A., Kameri-Mbote, P. & Van Koppen, B., (2015). *Water is life, women's rights in national and local water governance in Southern and Eastern Africa*. Weave Press: Harare . [Online]. Available <http://www.enca.com/elections-2014/municipalities-vs-communities-why-safricans-are-angry>

Hunt, C., (2001). *How Safe is Safe? A Concise Review of the Health Impacts of Water Supply, Sanitation and Hygiene*. A WELL Study produced under Task.

Hunter, P., MacDonald, A.L. & Carter, R.C., (2010) Water supply and health. [Online]. Available  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2976720/>

Hurtado, D., (2005). *Compost Latrines in Rural Panama: Design, Construction and Evaluation of Pathogen Removal*. [Online]. Available:  
<http://www.cee.mtu.edu/peacecorps/studentfiles/HurtadoFinal%20report.pdf>

Inzizwe Project., (2012). *Information guide-volunteer work*. [Online]. Available  
[www.izizweprojects.co.za](http://www.izizweprojects.co.za)

Jabareen, Y., (2009). *Building a Conceptual Framework: Philosophy, Definitions and Procedure*. International Journal of Qualitative Methods, Vol. 8(4) :50-51.

Jacobs, H.E. & Louber, B.F., (2005). *Water – How is it used at home*.

Katsamunskaja, P., (2016). *The concept of governance and public governance theories*.

Khatri, K. & Vairavamoorthy, K., (2007). *Challenges for urban water supply and sanitation in the developing countries*. [Online].

Available <http://www.unescoihe.org/content/download/1016/11873/file/9.paper%20urbanisation%20kala%20draft.pdf>

Kistermann, T., (2008). *Water and Risk*. [Online].

Available [http://www.ihph.de/dokumente/whocc-news/Water\\_and\\_Risk\\_Vol\\_13.pdf](http://www.ihph.de/dokumente/whocc-news/Water_and_Risk_Vol_13.pdf)

Kjar, A.M., (2004). *Governance*. Polity Press: United Kingdom.

Koma, S.B., (2010). *The State of Local Government in South Africa: Issues, Trends and Options*. Journal of Public Administration, Vol. 45(11) :111-120.

Kombrabail, H., (2009). *Research design*, [Online] Available:  
<http://www.scribd.com/doc/18132239/Research-Design>

Kraft, M. & Furlong, S., (2004). *Public policy: politics, analysis and alternatives*. CQ Press: Washington.

Kumssa, A. & Mbeche, I.M., (2004). 'The role of institutions in the development process in Africa'. *International Journal of Social Economics*. Vol. 31(1): 84-85.

Leedy, P.D. & Omrod, J.E., (2001). *Practical Research: Planning and design*. Merrill Prentice.

Li, Q., (2006). *An Investigation of the Challenges Facing the Nelson Mandela Bay Municipality in the Provision of Low-Income Housing*. Port Elizabeth: Nelson Mandela Metropolitan University.

Lowe, C. & Zemliansky, P., (2011). *Writing Spaces* (2nd Ed). Parlor Press.

Lowndes, V. & Pratchett, L., (2006). *CLEAR: Understanding Citizen Participation in Local Government- and How to Make It Work Better*. [Online]. Available [www.dmu.ac.uk/Igru](http://www.dmu.ac.uk/Igru)

Mafolo, M., (2012). *Reinforcing a Turnaround Strategy for Municipalities to Improve Performance*. *Africa's Public Service Delivery and Performance Review*, Vol. 1(2): 21-35.

Mackenzie, N. & Knipe, S., (2006). *Research dilemmas: Paradigms, methods and methodology*. *Issues in Educational Research*, Vol. 16(2): 193-205.

Managa, A., (2012). *Unfulfilled promises and their consequences: A reflection on local government performance and the critical issue of poor service delivery in South Africa*. Africa Institute of South Africa. Policy Brief No. 76.

Martino, D. & Zommers, Z., (n.d). *Environment for Development*. United Nations Environment Programme.

McAdam, D. McCarthy, J. & Zald, M., (1996). *Opportunities, mobilizing structures and framing processes: toward a synthetic, comparative perspective on social movements*, sited in McAdam, D. McCarthy, J. Zald, M. (eds), *Comparative perspectives on social movements: Political opportunities, mobilizing structures and cultural framings*. Cambridge: Cambridge University Press.

Moe, C. & Rheingas, R., (2006). *Global challenges in water, sanitation and health*. *Journal of water and health*. 4: pp 41-57.

Muleng, M., Manase, G. & Fawcett, B., (2004). *Building links for improved sanitation in poor urban settlements: Recommendations from research in Southern Africa*, Institute of irrigation and Development Studies: Southampton

Muller, M., (2008). *Free basic water-a sustainable instrument for a sustainable future in South Africa*, *Environment and Urbanization*. Vol. 20(1).

Nelson Mandela Bay Municipality. (2015). *Integrated Development Plan Financial year 2015/16 (14<sup>th</sup> Edition)*. Nelson Mandela Bay Municipality. Nelson Mandela Bay

Neuman, W.L., (2006). *Social Research Methods: Qualitative and Quantitative Approaches (6<sup>th</sup> ed)*., Boston: Allyn and Bacon. pp 224

O'Leary, Z., (2004). *The Essential Guide to Doing Research*. Sage Publications: London.

OECD., (2001). *Citizens as Partners- Information, Consultation and Public Participation in Policy Making*: Organization for Economic Cooperation and Development. OECD Publication: France.

Public Service Commission, *A Report on the State of the Public Service*. (South Africa). November 2001. [Online]. [https://www.gov.za/files/spservices\\_0](https://www.gov.za/files/spservices_0)

Republic of South Africa. (1994). *White Paper on Water and Sanitation 1994*. Department of Water Affairs and Forestry: Pretoria.

Republic of South Africa. (1996). *The Constitution of South African Act 108 of 1996*. Government Printer: Pretoria.

Republic of South Africa. (1997). *Batho Pele- 'People First' White Paper on Transforming Public Service*. Department of Public Service and Administration: Pretoria.

Republic of South Africa. (1997). *Water Services Act 108 of 1997*. Government Printer: Pretoria.

Republic of South Africa. (1998). *National Water Act 36 of 1998*. Government Printer: Pretoria.

Republic of South Africa. (1998). *White Paper on Local Government 1998*. Government Printer: Pretoria.

Republic of South Africa. (2000). *Municipal Systems Act No. 32 of 2000*. Government Printer: Pretoria.

Republic of South Africa. (2001). *Free Basic Water Policy*. Department of Water Affairs and Forestry: Pretoria.

Republic of South Africa. (2003). *Strategic Framework on Water Services of 2003*. Department of Water Affairs and Forestry: Pretoria.

Republic of South Africa. (2004). *Guidelines for Water Conservation and Water Demand Management in Water Management Areas and in the Water Services Sector*. South Africa: Department of Water Affairs and Forestry: Pretoria.

Republic of South Africa. (2005). *Our Blueprint for Survival*. Department of Water Affairs and Forestry: Pretoria.

Republic of South Africa. (n.d) *Integrated Development Plan: Department of Provincial and Local Government*: Pretoria.





Republic of South. (1998). *Municipal Structures Act No. 117 of 1998*. Government Printer: Pretoria.

Roudi-Fahimi, F., Creel, L. & De Souza, R., (2002). *Population and Water Scarcity in the Middle East and North Africa*. [Online]. Available: [http://www.prb.org/pdf/FindingTheBalance\\_Eng.pdf](http://www.prb.org/pdf/FindingTheBalance_Eng.pdf)

Scott, R., Cotton, A.P. & Govidan, B., (2003). *Sanitation and the poor: Water, engineering and development centre*. Loughrough: United Kingdom

Scherrer, C. & Saha, D., (2013). *The Food Crisis: Implications for Labour*. Deutsche Nationalbibliothek: Germany

Sigenu, K., (2006). *The role of rural women in mitigating water scarcity*. [Online]. Available :<http://etd.uovs.ac.za/ETDdb/theses/available/etd10262007144737/unrestricted/SigenuK.pdf>

Statistics South Africa. [Online] Available <http://www.statssa.gov.za/?p=11129>

Statistics South Africa,(2017) *Sustainable Development Goals: Indicator baseline report*. South Africa.

Swanepoel, H. & De Beer, F., (1997). *Introduction to development studies*. Johannesburg: Thomson.

Tapela, B.N., (2013), *Social Protests and Water Service Delivery in South Africa: Final report on characterisation of the political, economic, social, institutional, historical and cultural environment within which social protests occur*. WRC Report, Deliverable 5 of Project K5/2133/3.

Telmo, A., (2002). *A water supply and sanitation study of the village of Gouansolo in Mali. West Africa*. [Online]. Available: <http://www.cee.mtu.edu/peacecorps/studentfiles/telmo.pdf>

Thornhill, C., (2012). *Improving local government transformation in South Africa: Administration Publica*. Vol. 20(35):128-143, September 2012

Tissington, K., (2011). *Basic sanitation in South Africa: A guide to legislation, policy and practice* socio economic rights institute of South Africa

Trading Economics. [Online]. Available <https://tradingeconomics.com/south-africa/unemployment-rate>

Turok, B., (2007). *The Development state and monopoly power*. [Online]. Available <http://www.anc.org.za/show.php?doc=ancdocs/pubs/umrabulo/umrabulo30/art4.html>

United Nations, *Transforming our world: The 2030 Agenda for Sustainable development A/RES/70/1*

Van Stekeleburg, J. & Klandermans, B., (2013). *The social psychology of protest: Current Sociology*, Vol. 61(5):886-905 , September 2013

Water Information Network South Africa. (2013). *Sanitation upgrading programmes, lessons from the bucket eradicating programmes*: Water Research Commission. South Africa

Webster, A., (1984). *Introduction to the sociology of development*. Macmillan: Basingstoke.

Weiss, T.C., (2015). *Disabled world*.

WHO., (2000). *Looking back, looking ahead. Five decades of challenges and achievement in Environmental Sanitation and Health* (WHO Publication). June 2000.

Yin, R., (1994). *Case Study Research: Design and Methods*. SAGE Publications. London.

Zhang, W. & Abitbol, A., (2016). *The role of public relation in social capital*: Online journal of communication and media technologies, Vol (6).

Zikhali, T., (2015). *Factors affecting the effectiveness of pro-poor urban water service delivery in post-apartheid South Africa*. In Kotze, J.S. (ed), *South Africa's Democracy @ 20: Diagnosis and Prognosis*. Published Conference Proceedings.2014 Biennial Conference, SAAPS. 10-12 September 2014, pp 73-87.



## APPENDIX A

Some images of the bucket toilet system in Walmer Township, Nelson Mandela Bay Municipality.



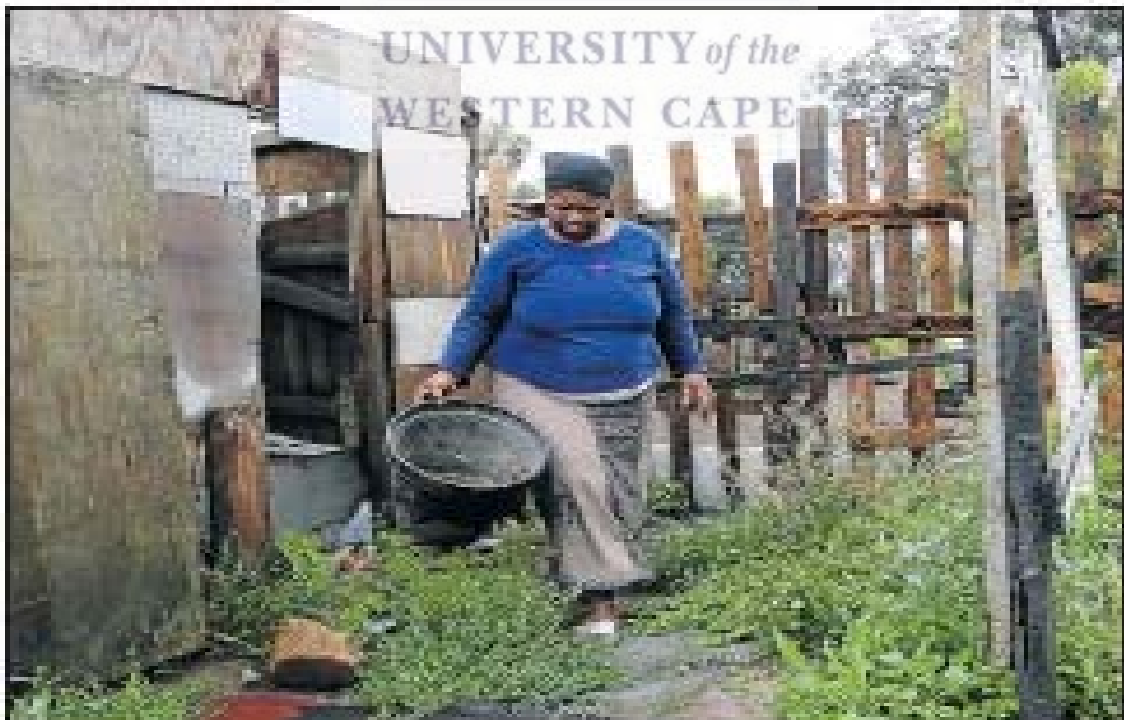
1. Front of a hired (private company - Omega) bucket toilet



2. Back of a hired (private company - Omega) toilet showing where the bucket sits



3. A bucket toilet belonging to the Municipality



4. A resident in Walmer collecting their own bucket

## APPENDIX B

Some images of the public water system in Walmer Township, Nelson Mandela Bay Municipality



5. Stand tap and its meter reader



6. A leaking tap



7. Running water from and caused by a leaking tap



## APPENDIX C

### Questionnaire

#### Personal Information (Questions for the community)

1. Age.....
2. Gender: Female  Male
3. Number of dependents in household.....
4. Highest level of education .....
5. Are you employed? Yes  No
6. If yes can you, please tell me how much you earn? .....

#### Water (Questions for the community)

7. How much water do you use per day? .....
8. Where do you get the water from? .....
9. What do you use the water for? .....
- .....
10. Are you satisfied with the quality of the water you get?.....
- .....
11. Do you pay for water? if yes, how much? .....
12. Are you able to get water all the time you need it? / Is the water available all time?  
.....
13. What would you take as minimum adequate provision for water? .....
- .....

#### Human waste disposal (Questions for the community)

14. Where do you go for human waste dispose? .....
- .....
15. If you are using a toilet what type of toilet is it?.....
- .....
- Where is it located?.....
- How many people use this toilet? .....
- Is the toilet always functional?.....

16. What are the problems you encounter with the human waste disposal services?  
.....  
.....

17. What would you take as minimum adequate provision for human disposal? .....  
.....

**Municipal services (Questions for the community and local councilors)**

18. What services does the municipality provide regarding water and human waste disposal?  
.....

19. What services would you like the municipality to provide? .....  
.....  
.....

**Municipal services (Municipal officials and councilors)**

20. What water services is the Municipality is required to supply for the community of Walmer Township?  
.....  
.....

21. What human waste disposal services is the Municipality is required to supply for the community of Walmer Township?  
.....  
.....

22. What is the minimum daily entitlement for water per person per daily constitutionally?  
.....

- Is NMBM meeting these requirements? .....
- If yes, how? .....
- If not, why? .....

23. Is there a minimum requirement for sanitation for communities that NMBM is required to meet?  
.....

- If yes, what is the minimum requirement?.....  
.....
- Is this being met for Walmer Township?  
.....
- If not why?  
.....