EVIDENCE BASED POLICY MAKING AS THE ALTERNATIVE FOR EFFECTIVE WATER POLICY DESIGN AND DEVELOPMENT: A CASE STUDY OF ETHEKWINI METROPOLITAN MUNICIPALITY

(SOUTH AFRICA)

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ABSTRACT

The notion of evidence-based decision-making has, over the years gained prominence, especially in the post millennium era. The evidence-based approach to decision-making seeks to ensure that implementation is successful. Too often decisions are taken and implemented, but the intended results are not met. Focusing on evidence when planning and implementing policy ensures that development initiatives directly address identified societal problem. Evidence is viewed as a tool to making informed rational decisions during policy development. Evidence-based policy making is about making policy decisions based on knowing with an estimated degree of certainty what works, at achieving which outcomes, for which groups of people, under what conditions, over what time span, and at what costs. Research has shown that South Africa does not have a standardised framework for developing and designing evidence-based policy.

This study explores the extent to which evidence informs the public policy making process in the South African water and sanitation sector. Building from existing work on evidence-based policy making in South Africa, it poses the following questions: 1) what is the extent of evidence use in public policy making in the South African water and sanitation sector? 2) Is there a need to improve and what should the alternative look like within the context of the fourth industrial revolution.

This study adopted a mixed methodology approach. Both qualitative and quantitative approaches were critical and relevant in carrying out this study, with purposive non-probability sampling being the sampling approach adopted. The qualitative research method was used to answer questions about the complex nature of phenomenon, mainly with the purpose of describing and understanding key variables from the participant's experiences, opinion, and point of view. A total of 13 semi-structured interviews, using a semi structured interview schedule, guided by open-ended questions, were conducted with selected interviewees. Respondents were selected based upon their policy responsibility in their respective institutions that are linked to water and sanitation policy process, which included; the National Department of Water and Sanitation, eThekwini Metropolitan Municipality, National Department of Cooperative Governance and Traditional Affairs, Water Research Commission and Pegasys Institute.

The quantitative element of the study sought to obtain opinions from the managerial employees at eThekwini Municipality, who are responsible for ensuring effective translation of policy objectives into water and sanitation delivery, in terms of the Water Services Act, 108 of 1997. Here, 100 self-administered survey questionnaires were sent out to officials at task grade 14 to 18 from eThekwini Water and Sanitation Department and was met with a 72% response rate. Data from both interviews and survey was analysed and consolidated, using the pre-determined themes for effective interpretation.

Analysis of the responses indicated that there is no common definition of what is regarded as evidence in the policy making process. In most cases, statistical information and other policy documents from government institutions are regarded as the only evidence that can be used to make policy decisions. There is no interaction with research institutions, outside of government, who are in possession of much valuable evidence for policy decision making in the water and sanitation sector. In this regard the study concluded that there is enough evidence (in numbers and variations) in the sector that remains unutilized to make policy decisions.

The findings of this study showed that the engagement of implementing institutions, including local government (Water Services Authorities) in the formulation of policies, has been inadequate. This was revealed when respondents from eThekwini Municipality failed to demonstrate a clear understanding of policy making process in the Department of Water and Sanitation. There was clear consensus on the importance of evidence in decision making process, despite there being no policy making framework in the Department of Water and Sanitation to guide evidence integration in the policy development and design process.

The findings further revealed that there is a large amount of evidence that is being collected and stored by various institutions, inside and outside government, that could be used for towards improved policy decision making. Additionally, the revealed that national government, through the Department of Planning, Monitoring and Evaluation, have introduced capacity building initiatives amongst government departments on evidence-based approach policy making, and that the Department of Water and Sanitation is participating in these efforts. There is a need for continuous capacity building on evidence-based policy making in the Department of Water and Sanitation.

This study concluded that limitations in evidence use in South African government, in general, ranges from consensus on evidence-based process, what constitutes evidence, selective use of evidence, political influence on evidence, the extent to which monitoring and evaluation can

provide enough evidence, and the purpose of research, among others. The study made the following recommendations: There is a need for the Department of Water and Sanitation to understand its stakeholders in the water and sanitation value chain and capitalise on their role and contributions to make more informed decisions; Invest in strengthening partnerships at the policy development and design level to ensure seamless policy implementation; Build capacity in conjunction with its partners and stakeholders on evidence-based policy development, design and implementation; and, Water Services Authorities to appoint water and sanitation policy specialists to act as conduit between the WSA and the Department of Water and Sanitation on policy matters and serve on the DWS policy teams.

This dissertation is dedicated to my late son, Tshiamo Phiwokuhle Xaba, who passed away on the 10th of July 2017 and my mother, Mrs Khonjiwe Vuyelwayini Xaba, who passed away on the 23rd of June 2020. May their souls rest in eternal peace.

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Abbreviations

Abbreviation	Full Name
APRM	Africa Peer Review Mechanism
CBA	Cost-Benefit Analysis
CD	Chief Director
CDWs	Community Development Workers
CEDAW	Convention on the Elimination of All Forms of Discrimination Against Women
CEO	Chief Executive Officer
CMA	Catchment Management Agency
COGTA	Department of Cooperative Governance and Traditional Affairs
CSO	Chief Strategy Officer
CWSS	Community Water Supply and Sanitation
DCOG	Department of Cooperative Governance
DHS	Department of Human Settlements
DPME	Department of Performance Monitoring and Evaluation
DPSA	Department of Public Service and Administration
DWA	Department of Water Affairs
DWAF	Department of Water Affairs and Forestry
DWS	Department of Water and Sanitation
EBP	Evidence-based policy
EBPM	Evidence-based policy making
EIDM	Evidence Informed Decision Making
EIP	Evidence Informed Policy
EIPM	Evidence Informed Policy Making
FOSAD	Forum of South African Directors-General
GHS	General Household Survey
IAP2	International Association for Public Participation
ICLEI	International Council for Local Environmental Initiatives
IDP	Integrated Development Plan
IGR	Intergovernmental Relations
IUDF	Integrated Urban Development Framework
M&E	Monitoring and Evaluation
MDG	Millennium Development Goal
MTSF	Medium-Term Strategic Framework
NDP	National Development Plan
NPC	National Planning Commission
NWP	National Water Policy
NWPR	National Water Policy Review
NWRS2	National Water Resource Strategy 2
OGP	Open Government Partnership
OPSC	Office of the Public Service Commission
PGDS	Provincial Growth and Development Strategy
RDP	Reconstruction and Development Programme
RIA	Regulatory Impact Assessment
RSA	Republic of South Africa
SA	South Africa
SADC	Southern African Development Community
SAHRC	South African Human Rights Commission
SALGA	South African Local Government Association

SDG	Sustainable Development Goals
SEIAS	Socio-Economic Impact Assessment System
SERI	Socio-Economic Rights Institute of South Africa
SFWS	Strategic Framework for Water Services
SOP	Standard Operating Procedure
StatsSA	Statistics South Africa
UCLG	United Cities and Local Government
UK	United Kingdom
UN	United Nations
UNFPA	United Nations Population Fund
UNICEF	United Nations International Children's Emergency Fund
USA	United States of America
VIPs	Ventilated Improved Pit Latrines
WHO	World Health Organisation
WRC	Water Research Commission
WSA	Water Services Authority

CHAPTER 1: INTRODUCTION AND BACKGROUND

1.1 BACKGROUND OF THE STUDY

Public policy can be defined as an instrument of government which reflects a willingness or unwillingness on the part of government to act on particular issues that affect society (Dye, 2013; Anderson, 2011; Birkland, 2011). Thus, public policies are a statement of intent (Cloete, Wissink and de Conning, 2006: 3). The earliest writings on public policy are linked to developments in public administration. This body of knowledge has been growing steadily. The result is that, the discipline has over time presented varying ideas, theories and interpretations over best practices. The literature reflects varying interpretations over the process of public policy, however there is agreement that specific processes, phases or stages must be followed (Dye, 2013). Additionally, there are numerous models and theories that propose best methods for developing public policies (Howlett and Ramesh, 2003; De Conning and Cloete, 2006; Ile, Eresia-Eke and Allen-Ile, 2012). Despite these differences in opinion, scholars agree that the public policy process is a process of development and change which involves a multitude of stakeholders.

There have been several key shifts in public policy literature since the end of the Second World War. Post the Second World War the focus was on social problems and ideas about public policy which were influenced by the dominant Basic Needs Approach (Heineman, Bluhm, Peterson and Kearny, 1997). In the 1950s and 1960s ideas about public policy were dominated by the Keynesian Economic Model, which incorporated socio-economic and political ideals (Heineman, Bluhm, Peterson and Kearny, 1997:14-16). The 1970s to mid-1980s witnessed a focus on gender issues being integrated into development issues revealing policies directed towards equity, anti-poverty and efficiency. Herein, policy advocated for women's strategic needs in policy development (Karl, 1995:94-96). The mid 1980s into the 1990's saw the emergence of good governance as a key factor in service delivery (The World Bank Development Report, 2003:160-162; May, 1997:1-3), where the focus was on improved service delivery, efficiency and effectiveness, with a strong focus on public accountability and financial management (May, 1997:1-3). Beyond the 1990s, the focus on good governance has grown, and leaned towards a focus on democratizing public policy making, and an emphasis on capacity building and responsive policies, which has been witnessed especially within Africa (Kayizzi-Mugerwa, 2003:15).

These shifts in broader thinking reflects continuous evolution in public policy. The move towards evidence-based approaches in the early 2000s represents the major shift in the search for improved public policy implementation and overall policy impact in society (Sutcliffe and Court, 2005; Hammersley, 2005; Freiberg and Carson, 2010; Marais and Matebesi, 2012; Bouffard and Reid, 2012; Head, 2015; Paine Cronin and Sadan, 2015; Howlett and Mukherjee, 2017; Dunn, 2018; Cloete, de Coning, Wissink and Rabie, 2018).

These shifts in public policy represents changes from opinion or ideology-based policy, as demonstrated in the policy evolution literature from 1950 to early 2000s, to evidence-based policy making process from 2000s and beyond. It is important to highlight that advocates of evidence-based approaches recognise the need to move away from using ideologies as sufficient grounds for decision making, to a scenario where examining research evidence, in order to inform decisions, is preferred. Evidence-Based Policy (EBP) (Sutcliffe and Court, 2005; Davis, 2004) as an emerging paradigm is sometimes referred to as Evidence-Based Practice (EBP) (Bouffard and Reid, 2012), Evidence-Based Policymaking (EBPM) (Freiberg and Carson, 2010), Evidence-Informed Policy making (EIPM) (Head, 2015), and Evidence-Informed Decision Making (EIDM) (Head, 2015; Langer, Stewart, Erasmus and de Wet, 2015). Therefore, providing a comprehensively all-encompassing definition is particularly difficult. However, there is consensus on what the concept means in the specific field and context in which is being applied. These fields include medicine, education, psychology, criminology and social work. Generally, evidence-based refers to the practice in which decisions are taken based upon the best available evidence. In the field of public policy, evidence includes "research evidence, practitioner expertise, and participant preferences, values, and goals" (Bouffard and Reid, 2012: 4)

Within this context, policy design and development should not be based on theories alone. Banks (2009) argues that if policies are based on theories alone, then we can conclude that most of them are experimental in nature. The rationale behind EBP is that policy decisions should be informed by available evidence, and should include rational analysis, because public policy that is developed, based on systematic and strong evidence, is more likely to produce better outcomes (Banks, 2009; Head, 2015; Freiberg and Carson, 2010; Bouffard and Reid, 2012). The EBP approach to policymaking seeks to ensure that policy outcomes are successful.

Too often policies are formulated and implemented, but the intended results are not met (Makae, 2009: 134; Majola, 2014: 12). Focusing on evidence when developing policy has the potential to ensure that policy initiatives directly address the problems identified in society (Parsons, 2002; Banks, 2009; Sutcliffe and Court, 2005; Head, 2015). Evidence-based policy making approach is therefore seen as a mechanism to improving public policy making and ultimately improving policy implementation (Parsons, 2002). It provides for "rigorously objective evidence as a key informant of policy, but also for improving implementation of public services" (Department of Planning, Monitoring and Evaluation, 2015). The emergence of EBP thus did not replace the era of governance but sought to enhance best practices within Public Policy.

Within the South African context, the government has been hailed as having excellent policies but struggling with implementation (NDP, 2011: 417; Tebele, 2016: iii). Additionally, research indicates that the policies are not informed by evidence (Marais and Matebesi, 2012; Paine Cronin and Sadan, 2015; and Lukey, 2016). The Minister in the Department of Planning, Monitoring and Evaluation (DPME) in the Presidency, and the Chairperson of the National Planning Commission, Minister Jeff Radebe, emphasized the importance of evidence-based policy making and practice for improved governance towards achieving the objectives of the National Development Plan (NDP). He asserted that "in order for government to do these things better, we require evidence-based information in order to assist us in diagnosing the problems so that we may be able to prescribe an appropriate remedy" (SAGNA, 29 October 2015). He further explained that evidence use is crucial in making government policies and programmes that will maximize government's impact on society.

The Department of Planning, Monitoring and Evaluation (DPME) has partnered with various institutions (University of Cape Town and University of Johannesburg) in order to train various senior government officials on evidence-based policy (Langer, Stewart, Erasmus and de Wet, 2015; South African Government News Agency, 2015; DPME, 2015). Based on this context, it is crucial that researchers also constructively contribute in these efforts to institutionalise evidence-based policy making. The existing literature indicates that this is a new phenomenon in South Africa and no sector-specific study has been conducted thus far. This call for change in the way in which policies are designed and implemented comes in the wake of poor implementation and failure to effectively deliver services to communities (Juma and Onkware, 2015; Tebele, 2016; StatsSA, 2019; SAHRC, 2014: 28; Komo and Tshiyoyo, 2015: 41).

1.2 STATEMENT OF THE PROBLEM

The Department of Water and Sanitation (DWS) is the custodian of South Africa's water resources. It is primarily responsible for the formulation and regulation of the implementation of policies governing the water and sanitation sector. Section 155, sub-section 7 of the Constitution of the Republic of South Africa, 1996, gives national government the mandate to regulate water services. This mandate defines the DWS's role as that of a regulator rather than the actual water and sanitation services provider. In performing its legislative function, the DWS develops public policies as a mechanism to regulate the sector in the delivery of services.

While striving to ensure that all South Africans gain access to clean adequate water and dignified sanitation, the Department also promotes effective and efficient water resources management to ensure sustainable economic and social development (Department of Water Affairs and Forestry, 1998). The management of these processes, however, takes place at the local government level.

Based on the figures provided by Statistics South Africa (Census, 2011; General Household Survey, 2016; General Household Survey, 2017; and General Household Survey, 2018), much progress has been achieved in expanding access to water services since 1994. However, the rate of provision is considered to be too slow (StatsSA, 2019: ix; SAHRC, 2014:28), due to a combination of poor financial management and overall financial viability of municipalities (Koma, 2010: 118), on the one hand, and poor policy implementation challenges, which are particularly evident in small towns and rural areas (SERI, 2011: 63).

This study sought to examine the extent to which evidence from municipalities is integrated into the policy process. In order to achieve this, the study examined two key overarching questions, *viz*. What is the process in place by the Department of Water and Sanitation to use experiential evidence emanating from Water Services Authorities? And What is the extent of evidence use in policy making at the Department of Water and Sanitation during public policy formulation process?

1.3 SCOPE OF THE STUDY

The Department of Water and Sanitation (DSW) is one of the twenty-six ministries within the government of South Africa and is the custodian of South Africa's water resources (National Water Act, 1998). It is primarily responsible for the formulation and regulation of the

implementation of policies governing the water and sanitation sector. As a result, the Department engages in processes to oversee and regulate water and sanitation services provision through appropriate policies, strategies and regulations which are implemented by local government (National Water Policy for South Africa, 1997). While the Department has developed numerous water and sanitation policies that guide the manner and the process in which local government provides services to citizen, the duty to translate those policies into implementable actions rests with local government (Water Services Act, 1997). Consequently, local government is responsible for water and sanitation policy implementation.

Although South Africa exceeded the Millennium Development Goals target in terms of provision of water and sanitation, it has not provided universal access (Water Research Commission, 2018). For the Department of Water and Sanitation to sustain the 95% access to water and 80% access to safe sanitation (Water Research Commission, 2014: 14), it is important for them to establish and in some cases increase meaningful participation of local government in the decision-making process.

Evidence-based policy making offers one way in which improved policy implementation can be achieved through the opportunity offered for improved decision making. This study examined the extent to which evidence from municipalities is integrated into the policy process. eThekwini Metropolitan Municipality, as a Water Services Authority, was used as a case study. The figure below shows the eThekwini Metropolitan Municipality's location in relation to the entire country and KwaZulu-Natal as a province and other municipalities.

Figure 1:eThekwini Metropolitan Municipality location
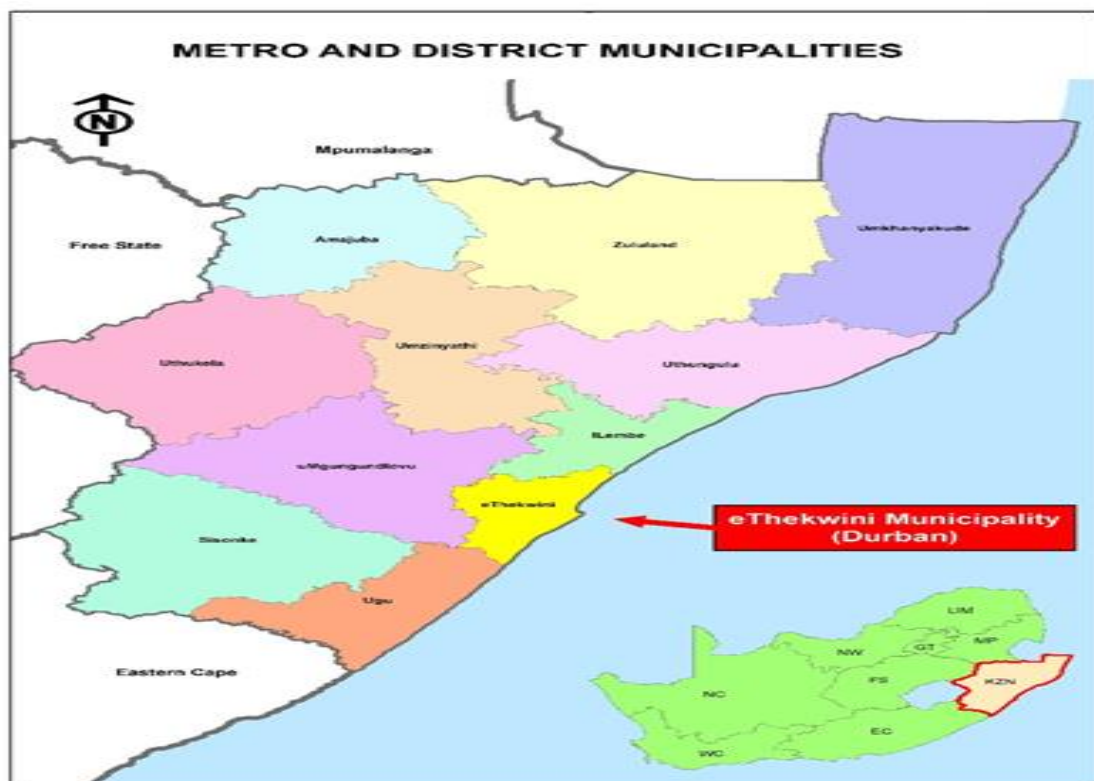
Source: eThekwini Metro Municipality IDP, 2019/2020

The study focused on understanding how evidence is integrated at each stage of the policy making process. The study examined current Departmental process in terms of the extent to which evidence informs decisions. This in-depth examination and analysis were undertaken with the intention of formulating an alternative model for evidence-based policy decision making in the Department of Water and Sanitation.

1.4 RATIONALE FOR THE CASE STUDY

The eThekwini Metropolitan Municipality was selected as a case study because of its status as a Water Services Authority. In total, the are 152 municipalities in the country that are classified by the National Department of Cooperative Governance and Traditional Affairs as Water Services Authorities (WSAs). These municipalities are entrusted with a responsibility to provide water and sanitation services to all citizens in South Africa (Water Services Act, 1997). The rationale for choosing eThekwini Municipality, is because it is one of the 8 metropolitan municipalities (big Water Services Authorities); and because it presents a unique institutional arrangement of dual governance because of the coexistence of Traditional Authorities governing through Ingonyama Trust and the Local Government System, within the same

municipality. About 68% of the Municipal area is considered rural and approximately 32% the remainder is urban (eThekwini Municipality Spatial Development Framework, 2018/2019: 57).

Additionally, the Municipality is one of the municipalities that despite its urban-rural divide, is able to deliver water services to 97% of its households (StatsSA, 2017: 38). A case study investigating current practices within this municipality offers opportunity for learning for both the Department of Water and Sanitation and other Water Services Authorities. The outcomes of this case study will further contribute to a new body of knowledge in terms of evidence-based approach in the water and sanitation sector and help improve the manner in which water and sanitation provision is being carried out.

1.5 RESEARCH OBJECTIVES OF THE STUDY

This research adopted the evidence-based public policy making process as its main theoretical framework. This is based on the premise that public policy is viewed as mechanism for government to provide services to its citizenry. In doing so, the following is identified as key objectives of this study:

- To examine the process of public policy making in the Department of Water and Sanitation.
- To establish the extent to which evidence-based policy making is used in the water and sanitation sector in South Africa.
- To identify the methods used and consultation processes used to collect evidence for the purpose of policy development within the Department of Water and Sanitation.
- To examine the level and nature of Water Services Authority involvement in the policy development process.
- To propose an alternative model to achieve evidence-based policy making process within the Department of Water and Sanitation.

1.6 KEY QUESTIONS

The central research question that was answered is – *to what extent should evidence from Water Services Authorities (WSAs) be used to inform water and sanitation policies in order to improve their implementation and achieve universal access to water and sanitation for all?* This research question was further broken down to: What is the process in place by the Department of Water and Sanitation to use experiential evidence emanating from Water Services

Authorities? What is the extent of evidence use currently in policy making at the Department of Water and Sanitation? Is there a need for a new system or amendment to the existing?

In doing so, five key research questions were explored:

- How is public policy and its processes understood by the Department of Water and Sanitation?
- What is the process that is being followed by the Department of Water and Sanitation in ensuring that its policies are based or informed by evidence?
- How and by whom is evidence provided for the purposes of policy development in the Department of Water and Sanitation?
- What is the contribution of the Water Services Authority (WSA) to the policy process?
- What is the alternative model for an evidence-based policy in the water and sanitation sector?

1.7 DEFINITION OF KEY TERMS

1.7.1 Evidence

In this study, evidence is understood as credible information that can be used to predict with an estimated degree of certainty what works, at achieving which outcomes, for which groups of people, under what conditions, over what time span, and at what costs, during policy development (DPME, 2014; Punton, Hagerman, Brown, Echt, Fisher, Lloyd, Morton and Vogel, 2016). Within this context, 'evidence' emanating from implementation experience of local government is most crucial and local government should endeavour to provide this kind of evidence.

1.7.2 Public

The Oxford Dictionary defines the public as, "a section of the community having particular interests or in some special connection" (The Oxford dictionary, 1990: 966). In the context of public policy, the public refers to stakeholder, individuals or groups, which are directly or indirectly, affected by a certain cause of action by government.

1.7.3 Policy

Anderson (2011:7) defines "policy" as a relatively stable, purposive course of action or inaction followed by an actor or set of actors in dealing with the problem or matter of concern. In short,

Coning (2006:3) stated that policy is "a statement of intent" whereby the concept specifies the basic principles to be pursued in attaining specific goals. He further stated that policy interprets the value of society and is usually embodied in the management of pertinent projects and programmes.

1.7.4   Policy Processes

Conyers (1984:15) indicates, "policy process involves the making of decisions about the direction in which change should occur. Butter (1992:43-44) argued that policy formulation is "the collecting and analyzing of information and formulation of advice regarding the policy to be followed." This entails that policy formulation is the process by which the end result is a policy. Policy process is viewed by Anderson (1975: 19) as a "sequential pattern of action involving a number of functional categories of activity that can be analytically distinguished namely problem identification and agenda formation, formulation, adoption, implementation and evaluation".

1.8 RESEARCH METHODOLOGY

In many cases, research methodology is often confused with research design, and sometimes the terms are used interchangeably (Marczyk, DeMatteo and Festinger, 2005). Marczyk, DeMatteo and Festinger (2005: 22) provide a clear distinction between the two terms by defining methodology as "the principles, procedures, and practices that govern research". While, research design refers to "the plan used to examine the question of interest". Creswell (1994: 1) submits that research design "begins with the selection of a topic and paradigm". In essence, methodology should be able to provide the overview of how the research project was undertaken and what informed procedures and processes when carrying out the project.

McGregor and Murnane (2010: 420) provide an overarching summation of what is meant by methodology in relation to both methods and entire research study. They suggest that "the word methodology comprises two nouns: method and ology, which means a branch of knowledge; hence, methodology is a branch of knowledge that deals with the general principles or axioms of the generation of new knowledge…Simply put, methodology refers to how each of logic, reality, values and what counts as knowledge inform research". Kothari (2004: 8) argues that research methodology provides "various steps that are generally adopted by a researcher in studying his research problem along with the logic behind them". Research methodology thus

allows the reader to understand the research process that was adopted in conducting a particular study.

This study adopted a mixed methodology approach. According to Collins, Onwuegbuzie, & Jiao (2007:1); and Creswell and Plano Clark (2007:12) the mixed method approach refers to the combination of both qualitative and quantitative research techniques into a single study to provide a complete and better understanding of the research problem. This approach allows for comparison and confirmation of responses which helps in increasing the study's credibility and validity (Hussein, 2009: 3). This study took a descriptive case study design approach. The case study approach allows for data to be collected and analyzed based on a single unit in which conclusions can be made and generalized to the whole population (De Vaus, 2001).

1.8.1 Sampling

Guided by the work of Hall and Hall (1996), Neuman (1997), May (2002), Ritchie and Lewis (2003), Kothari (2004), Sarantakos (2005), Bless, Higson-Smith and Kagee (2006), Kumar (2011), on sampling and sampling procedures, this study adopted a non-probability sampling method. The study utilised the purposive sampling method. This technique was applied in the both the qualitative interviews and quantitative self-administered questionnaire. In adopting this methodology, the size, manageability, accessibility, acceptable social research ratio, threshold and potential for saturation were considered.

For the interviews, purposive non-probability sampling was used to select respondents who occupy portfolios which include policy development and implementation, and who are considered to have the relevant knowledge and expertise regarding water and sanitation policy development. These respondents included: 5 policy officials from the national Department of Water and Sanitation; 3 executive officials from eThekwini Municipality; 2 officials from the national Department of Cooperative Governance and Traditional Affairs; 2 executives from the Water Research Commission and 1 senior official from the Pegasys Institute. Table 1 below shows the number of interviews that were initially planned vs the number of interviews that were conducted by the end of this study.

Table 1: List of Interviewees

Institution	Total population	Number of Planned Interviews	Number of completed interviews
National Department of Water and Sanitation – CD: Policy and Strategy	25	5	5
National Department of Cooperative Governance – Branch: RUDLS	3	1	2
South African Local Government Association – Strategy, Policy and Research	8	1	0
Water Research Commission	5	2	2
Pegasys Institute	7	1	1
eThekwini Metropolitan Municipality	12	10	3

In some cases, interviews could not be secured due to reasons including unwillingness to participate by identified respondents, non-response to requests to participate, cancelation and continuous postponement of appointments. At the end of the study, a total of 13 interviews were conducted vs 20 that was planned. The researcher, in upholding the right to refuse to be included in the study, recognised that some potential respondents did not want to be interviewed, and based upon the quality of the responses obtained from the interviews already conducted, deemed that saturation had occurred, and did not pursue individuals.

For the quantitative data collection, the target population was employees from the eThekwini Municipality Water and Sanitation Department, who are in managerial positions (Grade 14 – 18), and thus directly responsible for Water and Sanitation policy responsibilities within the municipality. The intention of this was, to seek the perceptions of these managers about their role and contribution in the policy development process; to gain understanding of past and present contributions in the policy development process; to identify the nature of these contributions; and to ascertain what they consider to be key for improved policy development.

An initial total population of **170** employees was identified based on the municipality's organogram, however, after Ethical Clearance was obtained from UKZN, the database from the Human Resource Department of eThekwini Municipality revealed that the total number of employees in these positions totaled **100**. Thus, a total of **100** self-administered questionnaires were sent to potential respondents using *surveyplanet.com*. Potential respondents were emailed to seek their participation, which was accompanied by the Gatekeeper's Permission letter. A total of **72** responses was received.

Table 2: Total sample

Sample type	Sample size	Number of completed surveys
Survey sample	100	72

1.8.2 The Response Rate

The study was met with 65% and 72% response rate for interviews and self-administered survey questionnaire, respectively. Based upon the argument by Dillman (1983: 360), Schuman and Presser (1996: 331) and Punch (2003: 42), this was deemed sufficient. This is further articulated by Neuman (2014: 478) when referring that "adequacy is attained when sufficient data has been collected that saturation occurs". Based upon the data received, saturation had been achieved.

The qualitative data collected from the interviews was analysed through thematic analysis based upon emerging themes from literature review, case studies and empirical data, namely: Contextualization and understanding of public policy making in the Department of Water and Sanitation; Understanding what counts as evidence in evidence-based policy making; Bridging the gap between research and policy; Evidence integration to policy development and design; Evidence collection for the purpose of policy development and design; Organisational capacity and contribution, and; Evidence-based policy making: The modern approach. The data collected from the questionnaire was organised using Microsoft. This allowed for data collected to be presented in graphs and tables.

1.9 LIMITATIONS

The aim of the study was to investigate the extent to which evidence, emanating from the Water Services Authorities (WSAs) in the eThekwini Municipality, is used to inform water and

sanitation policy development. Further, the study sought to examine the extent to which this evidence results in the improvement of policy implementation through reflecting on the perceptions of managers who work directly with the policy process. A limitation of the study is that it takes on a case study approach by focussing on eThekwini Municipality. However, given the uniqueness of the municipality through its rural urban duality, the results, and the model suggested, can be adapted for use by other municipalities in South Africa.

1.10 ETHICAL CONSIDERATIONS

The collection of data for the completion of this study was done under the guidance of the Supervisor, and in line with the UKZN requirements for research ethics. Informed consent was obtained from all participants. The confidentiality and anonymity of participants was maintained by coding responses. The management and storage of raw data has been maintained, in line with the University policy.

1.11 CHAPTER OUTLINE

This dissertation is divided into six chapters which are organized as follows:

Chapter One: Introduction and Background

Chapter One provided an overview of the study and outlined the background of the study, the problem statement, scope of the study, aims and objectives and key questions to be addressed in the study. The Chapter further provided reflections on the methodology adopted and the limitations of the study.

Chapter Two: Understand Public Policy and Evidence-Based Policy Making

Chapter Two explores existing literature on the public policy and public policy formulation process, and unpacks relevant theories underpinning them. The definition and analysis of concepts relevant to the study is also undertaken under this chapter. The Chapter further reflects on relevant case studies and highlights the key debates in relation to evidence-based policy making. The last sections of the chapter will briefly highlight the existing debate on evidence-based policy design and development in South Africa and examines its relevance for the water and sanitation sector.

Chapter Three: Public Policy in the Context of South Africa

This Chapter locates public policy formulation at the center of improving service delivery and provides an analysis of service delivery within the context of governance. This Chapter further provides an overview of the South African government configuration, the constitutional mandate at the national and local level, through the Department of Water and Sanitation, and the municipalities (through the Water Services Authorities) respectively. The Chapter also examines the public policy decision-making process at the Department of Water and Sanitation, and in so doing, highlights the key challenges in this regard.

Chapter Four: Research Methodology

This chapter explores methodological positions adopted by this study and reflects on the approach adopted for the analysis of data.

Chapter Five: Presentation and Discussion of empirical Findings

Chapter Five provides for the presentation, analysis and discussion of the data collected by way of interviews and self-administered questionnaire.

Chapter Six: Conclusion and Recommendations

Chapter Six presents the conclusions drawn from the literature review and empirical component of the study. This is done through revisiting the study objectives and is followed by recommendations and presentation of a model for improved evidence-based policy design and integration in the water and sanitation policy development process.

1.12 CHAPTER SUMMARY

The aim of this chapter was to introduce this research study on evidence-based policy making. The Chapter introduced the problem, objectives of the study, scope, broad questions to be investigated and reflected on the overall study methodology. It provided an overview and the structure of the dissertation by unpacking each chapter. The Chapter that follows explores existing literature on the public policy and public policy making process and theories. It will provide definition and analysis of concepts relevant to the study. The Chapter further reflects on relevant case studies on evidence-based policy making and derive key themes that underpin evidence-based policy making.

CHAPTER 2: UNDERSTANDING PUBLIC POLICY AND EVIDENCE-BASED PUBLIC POLICY MAKING

2.1 INTRODUCTION

The previous chapter provided an introduction and background to the study. This chapter seeks to examine the theoretical framework around the concepts of public policy and evidence-based public policy making. This chapter is divided into three main sections. Section A focusses on defining public policy and public policy making. Section B unpacks the notion of evidence-based public policy making and its key elements. Section C reflects on relevant research and country case studies. The Chapter concludes that evidence-based policy making is used in a number of fields including medicine, criminology, psychology, and social work, among others. The existing literature suggest that policy decisions that are informed by evidence (in its various forms) are more effective and there is a need for further advancement of the practice. But first, what is public policy?

SECTION A: PUBLIC POLICY

2.2 DEFINING PUBLIC POLICY

Public policy has been widely defined by various scholars based on their academic background, context and school of thought (Cloete, de Coning, Wissink, and Rabie, 2018; Birkland, 2011; Dye, 2013; Hogwood and Gunn, 1984; Cairney, 2012). Dye (2013:3) defines public policy as "whatever governments choose to do or not to do". Dye's definition is based on further arguments that governments are entrusted with a responsibility of doing so many things, "thus public policies may regulate behaviour, organise bureaucracies, distribute benefits, or extract taxes". This definition suggests that public policy is an instrument used by government and its institutions to deliver on what is publicly expected by the citizenry. This definition however does not provide details on how, where and when public policies comes about.

In addition, Birkland (2011: 203) defines [public] policy "as a statement by government of what it intends to do or not to do, such as a law, regulation, ruling, decision or order, or combination of these. The lack of such statements may also be an implicit statement of policy". Birkland's definition further provides forms in which government and or its institutions presents or impose public policies to the general public. Similar sediments are presented by Cairney (2012: 22) when asserting that the definition of public policy can be context-based but it has everything to do with the "aim, decision and outcome" of and by government. This is reiterated by Cloete, De Conning and Wissink (2006: 3) who defined public policy as "a

statement of intent. Policy specifies the basic principles to be pursued in attaining specific goals. Policy interprets the values of society and is usually embodied in the management of pertinent projects and programmes".

In this study public policy is understood as defined by Cloete, de Coning, Wissink, and Rabie, (2018) that it is a "public sector statement of intent, including sometimes a more detailed program of action, to give effect to selected normative and empirical goals in order to improve or resolve perceived problems and needs in society in a specific way, thereby achieving desired changes in that society". Based on the scope and objectives of this study, this definition is more relevant. This definition provides a solid foundation for this study because it looks at public policy as the mechanism for government to better provide services to its citizenry. The definition looks at public policy as a targeted intervention that is informed by specific evidence emanating from the society to address a specific mischief.

There is consensus amongst many public policy scholars that public policy come as a result of a specific process, whether, linear (Dye, 2013; Howlett and Ramesh, 2003) or cyclical (Cairney, 2012; Parsons, 1995; Howlett and Ramesh, 2003) in a socio-political environment with a series of activities. From these definitions, it is therefore prudent to provide a clear characterisation of what is public policy and what makes it distinct and sole responsibility of government institutions at various levels and spheres.

Anderson (2011:7) provides a distinction between "Policy" and "Public Policy" by defining policy "as a relatively stable, purposive course of action or inaction followed by an actor or set of actors in dealing with the problem or matter of concern", whereas public policies "are developed by government bodies and or officials…they usually affect substantial number of people". The distinction indicates that "policies" can be either public or private. The difference between policy and public policy is that, public policies affect or impact on the general public whereas company or firm policies only affect, or impact people associated or have dealings with the company or a firm.

Public policies have predetermined process and procedures that need to be followed with several stages that involves specific activities (Dye, 2013; Anderson, 2011; Cloete, Wissink and de Coning, 2006). Public policies are instrumental in paving the direction of any government and the broader society (Anderson, 2011). There is consensus that good public

policies are measured through results that reflect progressive and prosperous communities (Cloete, 2006; Banks, 2009; Anderson, 2011; Birkland, 2011; Dye, 2013; Lesia, 2015; Head, 2015; Dunlop, Radaelli and Trein, 2018; Howlett and Mukherjee, 2017). This therefore confirms the importance of understanding the way public policies are formed or developed. Depending on the model or theory that is used to explain public policy making process, its stages varies. It is therefore prudent that models of public policy making be put on the fore before unpacking stages of the policy making process.

2.3 UNDERSTANDING MODELS OF PUBLIC POLICY MAKING PROCESS

In the study of public policy, scholars further use models to further illustrate the public policy formulation process and methods (Anderson, 2011; Birkland, 2011; Dye, 2013; Dunlop, Radaelli and Trein, 2018; Howlett and Mukherjee, 2017). These models help to unpack different approaches and assumptions informing public policy making processes.

Dye (2013:16-27) and Hill (2009: 25-110) outlines eight theories that poses different views on public policy, namely: Process model (views policy as a political activity); Institutional model (policy as an institutional output); Rational model (policy as maximum social gain); Incremental model (policy as variations on the past); Group theory (policy as equilibrium in the group struggle); Elite theory (policy as an elite preference); Public Choice theory (policy as collective decision making by self-interested individuals); and, Game theory (policy as rational choice in competitive situations). These theories are crucial to systematically understand public policy making process (Peters, Hopkins, and Barnett, 2016; Dunlop, Radaelli and Trein, 2018). De Coning and Cloete (2006: 33), asserts that theories of public policy formulation are systematic, consistent and reliable explanation and prediction of relationships among specific variables built on various concepts.

The public policy process has models which represents the interpretation and understanding by different scholars and governments depending on their context. Therefore "governments choose the model which best suits them in the process of undertaking policy making processes" (Lesia, 2015: 22). This assertion does not necessarily suggest that governments must only use one model, it can be a combination of models in one policy being formulated. In this section, a brief description of 5 prominent policy making models are outlined. These models revolve around two perspectives, 1) views public policy making process in a linear fashion, 2) views public policy making process in a cycle fashion.

The first model is Lasswell's model of public policy process (Howlett and Ramesh, 2003; De Marchi, Lucertini and Tsoukiàs, 2014). Lasswell was a prominent scholar of the 1950s that come up with the idea of modelling the policy making process in terms of stages (De Marchi, Lucertini and Tsoukiàs, 2014). He is known as "a founding father of public policy as a field of study" (Parsons, 2002: 43). He introduced a model of the process divided in seven stages as outlined above. This set of stages has been contested and criticised but provided basis for the development of other models used to systematically study public policy process (De Marchi, Lucertini, and Tsoukiàs, 2014). Lasswell's model of the stages of policymaking focuses on decision-making by government, but mostly ignores the external and institutional influences on government behaviour or capacity. This model defines policy as something that is time-bound, which must come to an end at some point. This is contrary to the view that public policy formulation is cyclical, and the cycle never ends. Worth noting that in terms of this model, policy evaluation only takes place after policy termination.

The second model is known as Brewer's Model of public policy process. Brewer's model presents a less complex and shorter version of the policy model compared to Lasswell's model, and identifies the following stages in the policy formulation process (Howlett and Ramesh, 2003: 12); Invention (problem identification); Estimation (calculation of risks, costs and benefits of each possible solution); Selection (deciding on one or some combination of solutions); Implementation of selected option; Evaluation of results, and; Termination of policy based on the conclusions reached by its evaluation. Brewer's model regards the policy process as an ongoing cycle. One of the biggest disadvantages of using the policy cycle model is that it creates an artificial and idealistic view on policy (Dye, 2013; Howlett and Ramesh, 2003).

In contrast to these cyclical models, the third model is Dunn's model. Dunn provides a process model of policymaking. Such a model reflects international experience of policymaking. According to this model the process is a series of intellectual activities that take place within a set of mainly political activities. These political activities constitute the policy-making process. Dunn sees the process as a series of interdependent phases (De Coning and Cloete, 2006:48). Dunn's policy making model presents an even shorter process of five interdependent phases.

The fourth model is called Wissink's stage model. Wissink's stage model of policymaking is an important contribution the improvement of the process model. Wissink provides an

alternative approach by dividing the different phases of the policy process into descriptive stages according to the specific dynamics and activities leading to policy outputs. According to De Coning and Cloete (2006: 49) this model reflects the policy-making process as "consisting of activities which are often present, but ignored, in contemporary models". Although it is still a process linear model but its more detailed compared to Dunn's process model.

The fifth model is called generic process model. De Coning has developed a generic process model that reflects the redefinition of existing process (Dunn's and Wissink models) models into a generic model. This model accommodates the need for a comprehensive and generic policy process and can be applied to identify key considerations in policy-making endeavours (De Coning and Cloete, 2006:51–53). It improves and harmonise process models by acknowledging silent steps like policy analysis, policy consultation or dialogues and statutory process that occurs as part of policy adoption. Although it doesn't represent cyclical models, but it acknowledges that policy process steps are interrelated and does not have beginning and end points.

The sixth model is known as integrated model of public policy. The integrated model of public policy tries to integrate all the above models by retaining what is perceived as fundamental elements in public policy making process. Ile, Eresia-Eke, and Allen-Ile (2012:5) assert that "the model presents a logical and precise flow of the phases in the most concise form possible to enable management students and practitioners to make sense of the policy process". It harmonises the Dunn's, Wissink and De Coning's models. This is without dismissing the fact that there are sub-steps within each phase; all the phases are interrelated; negotiations and lobbying are happening at all phases; the whole process occurs under specific political context.

The above discussion of six models of public policy making process shows that there are various approaches to understanding and undertaking public policy making process. Regardless of which model is employed, the output should be the policy document (Lesia, 2015). In this context, it was important to provide a brief outline before discussing in detail the integrated model that forms the foundation for the theoretical framework of this study.

To further unpack the concept of public policy making as a process that include a series of stages, it is important to turn the attention to discussing the stages of public policy making

process. The next section focused on discussing the 6 stages or steps of public policy making process with the view to illustrate how all the above outlined models can be integrated into one without omitting any crucial stage. The theoretical framework of this study is founded on those stages.

2.4 STAGES OF PUBLIC POLICY FORMULATION

Many scholars, for example, Dye, 2013; Anderson, 2011; Cloete, Wissink and de Coning, 2006, among others, who study public policy making view it as a process with generally six main steps or stages. Butter (1992:43-44) argued that policy formulation is "the collecting and analysing of information and formulation of advice regarding the policy to be followed. This entails that policy formulation is the process by which the end result is a policy". Dye (2013: 33-34) describes public policy making as a political process comprising of series of political activities embedded in each of the following stages: Problem identification, agenda setting, formulation, legitimation, implementation, and evaluation. Further describe those stages as critical in understanding activities involved the public policy making process. This section will briefly unpack each stage as it relates to the entire process of public policy making.

2.4.1 Problem Identification Stage

Scholars of public policymaking use various terms to refer to this stage of policy formation such as problem identification (Howlett and Ramesh, 2003:12), policy problem (Anderson, 2011: 85; Ile, Eresia-Eke and Allen-Ile, 2012: 5) and policy initiation (De Conning and Cloete, 2006:49-53) stage. This stage is not common amongst all models of public policy making process. Other scholars tend to omit this stage or deal with it as part of agenda setting (Hill, 2009; Cairney, 2012; Cloete, de Coning, Wissink, and Rabie, 2018; Moran, Rein and Goodin, 2006). For the problem to warrant government intervention, there is a need to understand or classify what qualifies as public problems before considering public policy, because, as Hill (2009: 151) notes, not all problems are public problems.

Dye (2013) starts by asserting that deciding what should be classified as a policy problem is a very crucial task to policy making process. Even more important is to decide or be able to identify what will be the problems to be addressed than deciding what will be the solution. This implies that adequately understanding and unpacking the problem also provides scope of solution and interventions required. In an active citizenry and modern constitutional democracy

society, "individuals and groups can organise themselves to assume the tasks of defining problems and suggesting solutions" (Dye, 2013: 33).

Anderson (2011: 85-86) asserts that problem identification is founded on the premises that, the conventional approach to policy formation considered problems as given without understanding the characteristics and dimension of the problem. This, in modern society is seen as incomplete and provides inadequate solution formulation options. In the contemporary society it becomes increasingly more and more important to understand the nature, dimension, and extend of the problem in order to adequately address it.

This stage of policy making process in the principal function of policymakers or government officials which determines whether the problem is a public problem or not (Cairney, 2012: 32 and Cloete, de Coning, Wissink, and Rabie, 2018: 349).

2.4.2 Agenda Setting

This is the initial stage in the policy-making process after the stakeholders have identified a policy issue or problem in a society which they feel that it is worth the government's attention and action (Cloete, de Coning, Wissink, and Rabie, 2018:137). At this stage, stakeholders embark on a process of persuading each other and policy makers to act in support of their preferred solution to bring about change in society. Dye (2013: 34-42) argues that agenda setting can be as a result of tactical actions by the interested parties whereby they either create an issue, dramatize it, and or pressurise government to act on it. Amongst these interested parties is the mass media who are instrumental in advancing discourse to afford meaningful participation in agenda setting.

Cloete and Meyer (2006: 105) defined policy agenda setting as "a deliberate planning process through which policy issues are identified, problems defined and prioritized, support mobilized, and decision makers lobbied to take appropriate action". In addition, they further emphasise that policy agenda setting is "crucial phase in public policy making for two main reasons; firstly, it determines how stakeholders influence the policy agenda, and secondly, it determines who influences or controls the policy-making process". These reasons outlined above lead to the conclusion that policy agenda setting is both procedural and substantive (Cloete, de Coning, Wissink, and Rabie, 2018: 138).

Howlett and Ramesh (2003:120) regard agenda-setting as the most critical stage of the policy cycle. They further add that what happens at this stage has a definite impact on the entire policy formulation process and its subsequent results. The manner and form in which problems are acknowledged and identified determine how they will be addressed by policymakers. Cloete and Meyer (2006:105) agree and add that this stage determines who influences or controls the policy-making process, and how stakeholders influence the policy agenda. Birkland (2011: 87) extends the argument of policy agenda setting stage in policy making process by asserting that "many structural and historic factors influence the making of public policy and constitute, in part, the environment in which public policy is made". In this argument, the role of official and non-official actors, as defined by Birkland (2011), in the context in which the policy is being developed, becomes crucial. This point to the manner in which competing interest amongst the actors can be managed.

In summary, agenda setting is deemed as a crucial step in public policy process for three main reasons.1) it determines and prioritise what policy issues are addressed. 2) it determines who influences or controls the process. 3) how stakeholders influence the policy agenda (Cloete, de Coning, Wissink, and Rabie, 2018: 138).

2.4.3 Policy Formulation

Policy formulation (Hill, 2009: 171; Howlett and Ramesh, 2006: 143) or design (Cloete, de Coning, Wissink, and Rabie, 2018:159) is the most important stage in the policy process because it presents the government response towards addressing the problem identified in the agenda setting. After a problem has been recognised and the need to act has been acknowledged, policymakers need to decide which actions they are going to take. Formulating a course of action is the second stage in the policy cycle as set out by Howlett and Ramesh (2003: 13). This stage of policy making process refers to the assessment of possible solutions or options available for addressing the problem. It needs to be emphasised that choosing a solution does not resemble an orderly process, as policymakers may not share the same understanding of the causes of a problem. This implies that the search for possible solutions will be contentious, and subject to a wide variety of opinions and disagreement.

Lesia (2015: 18) argues that policy formulation should be understood as a function rather than a stage where dominant actors sit down and set ideas shaping significantly during their course of actions. This is in support of the view that policy formulation is "the function is more relevant for the developing countries where there are weak institutions, regulatory capacity, accountability and participation and responsibility of subsystem of government, so the formulation is a continuous process".

In the contemporary context that emphasises participatory, multi-layered and multi-stakeholder development as an important alternative to top-down approaches, the development of alternatives should include consultations with development policy experts, technocrats and the intended beneficiaries of the policy. In the light of South Africa's declared developmental trajectory in its National Development Plan (NDP), policy alternatives should be measured according to criteria that include social justice, democratic inclusivity, environmental sustainability and economic prosperity.

After setting the agenda, the next step is the actual drafting of the policy objectives. The actual output which becomes a policy document. This is where and when citizens, officials, political office bearers, interested and affected parties starts to visibly engage in persuasions in order to set objectives or formulate policies they see fit to improve existing situation and address the problems they are facing. This suggests that this is where public and stakeholder participation starts to gain momentum and is intensified. Stakeholders robustly engage each other in order to influence the policy output and outcome. In essence, this means that the policy formulation stage is more based on decision-making and public and stakeholder participation. Based on decision making in a sense that in includes that assessment and evaluation of policy options and from various points of view. It is as a result of negotiated outcome. Stakeholder participation in a sense that it is when the general public and stakeholders are visibly engaged and presenting their preferred policy options and continuously persuade the drafters. This stage includes wider public and stakeholder consultation and participation which will be dealt with in details later on in this chapter.

2.4.4 Policy Adoption

Once the persuasions, prioritisation, drafting and decision on policy options has been finalised, the next step will be policy adoption. This stage can also be referred to as policy publication,

policy approval or policy legitimisation. It is the stage where relevant authorities formally make a choice between alternatives developed by policy drafters (Brynard, 2006: 166). Lesia (2015:19) used Ismail, Bayat and Meyer (2001) definition of policy adoption as a "process whereby the policy recommendations made by officials are brought to the attention of council for amendments, approval and adoption". The council consists of community elected individuals which must represent the interests of the wider community. It is therefore expected that whatever policy recommendation they adopt should be in line with the needs of the communities they represent.

The policy adoption stage of public policy making process should not be viewed in isolation from the other stages. It in fact culminated from the other stages and is a crucial component of policy making process because this is where the official and authoritative decision that is binding to all is taken. Brynard (1996, cited in Bekker, 2006:166-167) express the similar view that decision-making is no more than a choice between alternatives at a given moment, and that the choices can be active (decision to act) or passive (decision not to act). This should also be viewed in the context of definition of policy making where the no adoption of the policy can be viewed as policy position itself. For instance, Anderson (2011: 6) defines public policy as "whatever that government choose to do and not to do". This is not dependent on whether this is pre-drafting or not in terms of policy making stages.

2.4.5 Policy Implementation

Once the decision has been taken about the appropriate alternative that will be put in place in order to address the identified problem, then the policy is being put into action or effect. According to Parsons (1995: 547) implementation refers to the actual application of the selected alternative with the aim to realise the objectives set during the deliberation process. Policy implementation therefore is a process of interaction between the settings of the goals and actions geared to achieve them (Pressman and Wildavsky, 1973, cited in Parsons, 1995: xv).

According to Howlett and Ramesh (1995: 185) policy implementation is where decisions are translated into actions. Implementation is defined as the process whereby programmes or policies are carried out, the translation of plans into actions. But this is not just a simple exercise. As Linder and Peters (1991: 131, cited in Howlett and Ramesh, 1995: 203) show,

policy implementation involves much more than just executing previous decisions or matching goals with means. Accordingly, they endorse the notion that policy implementation can only be meaningfully understood and evaluated in terms of the existing range of actors and institutions within which implementers make their decisions.

Cloete, Wissink and de Coning (2006: 183) argues that policy implementation is about "the conversion of mainly physical and financial resources into concrete service delivery outputs in the form of facilities and services, or into other concrete outputs aimed at achieving policy objectives". According to Ile, Eresia-Eke and Allen-Ile (2012: 11) argues that capacity as relates to structural and functional ability to implement policies, must consider all available resources including tangible and non-tangible elements. Special attention should also be given to the calibre of staff needed for optimisation of the structure. Critical questions should be asked in terms of what skills sets are required, experience, long and short-term interventions, support needed, etc.

In addition, the disposition of state and local implementers is a crucial determinant of implementation. That is, if the state and local implementers favour the policy or programme, then its implementation will fare much better than that of a policy or programme that state and local implementers are hostile to (Lester and Stewart, 2000).

Nxumalo (2016: 16) suggests that there is consensus amongst theorists that policy implementation process should be towards the realisation of previously set goals, however there are different policy implementation approaches that can be adopted or used jointly. This is one of the most important steps in the policy process as it is through this exercise that policy is put into practice to determine change in the lives of the people. This is the process where government and citizens can engage in active partnership with a view to making policy implementation a success. As Brynard and De Coning (2006: 180) further state, "in this partnership, strategic generation and planning are vital ingredients in the policy implementation interface, and various implementation instruments have emerged, such as planning, strategy generation, programme management, project management, operation management, contracting and privatization as well as various forms of public-private partnerships". This suggests that policy implementation is more about continuous negotiations and decision making between various stakeholders such as authorities, officials, implementers, beneficiaries, as well as businesses.

Nxumalo (2016:10) put forward the narrative by Hill and Hupe (2002) which identify different variables for policy implementation, namely "a) policy should provide concrete and specific standards for goal achievement; b) resources and incentives for implementation should be readily available; c) the policy implementation process should address the quality of inter-organisational relationships during implementation; d) implementing agencies are characterized by their linkages with policy making or a policy enforcing body; e) the policy implementation process and planning should include considerations of the social, economic and political environment; and, f) policy implementers should have the capacity to perform their tasks adequately and efficiently". Nxumalo (2016) concludes that, these variables for policy implementation are cautioning policy practitioners on crucial points to consider during each task in the process of policy implementation.

Cairney (2012: 37) further expands the argument on theories of policy implementation by classifying implementation into 'top-down' and 'bottom-up'. This assertion highlights that top-down policy implementation is built on the assumptions that policy decisions are both descriptive and prescriptive. This means that the decisions are made from the top and should be made from the top and be implemented at the bottom.

De Coning, Cloete and Burger (2018:200) argues that policy implementation can be better understood within the theoretical framework of complexity thinking. Understanding policy implementation and its complexity is necessary to fully understand underlying factors to policy success and failures.

2.4.6 Policy Evaluation

Policy Monitoring and Evaluation is the mechanism that assists policymakers to learn about the consequences of public policy on real-world conditions (Dye, 1995: 321). According to Ile, Eresia-Eke and Allen-Ile (2012: 13) policy evaluation "focuses on determining to what extent the policy outcomes have been attained, whether or not are in line with anticipated outcomes, as well as the efficiency of process followed". In this context, that's when stakeholders such as citizens and local government or council, private businesses, etc., come together to evaluate whether the outcome of the effort has yielded any initially anticipated policy outcomes. This

entails undertaking a critical assessment of whether the problem facing the public, the processes and procedures adopted as well as the set objectives have been met or not.

According to Cloete, Wissink and de Coning (2006, cited in Ile, Eresia-Eke and Allen-Ile, 2012: 28) "evaluations should be viewed as a judging process to compare explicit and implicit policy objectives with the real or projected outcomes or results". Ile, Eresia-Eke and Allen-Ile (2012: 29) outlines a number of benefits of this stage of public policy making process, amongst others, include: promoting political and administrative accountability; promotes transparency and openness; enables government to compare input with the results that are derived from the policy; provides opportunity to engage stakeholders in an attempt to get perspectives on the appropriateness of a particular policy, and; as means to improve management. It is through these assertions that Ismail et al. (2001, cited in Lesia 2015: 21) warn that "if the policy evaluation reveals any shortcomings or deviations or even the existence of new policy problems, these can be channelled into the policy process and the entire process repeat itself".

2.5 WHAT MAKES PUBLIC POLICY MAKING A COMPLEX AND MESSY PROCESS

This section reflects on various perspectives on complications and complexities of public policy making process. From the onset, let it be clear that policy making process is not a simple and clear step by step linear process. It involves different types of actors; influenced by practice/experimentation, events, learning from mistakes, actors' networks; shaped by discourses and "narratives"; and, has a highly political character. This is based on the argument by Cloete and de Conning (2011:33) when asserting that theories are used to systematically analyse and understand policy processes but the policy process in practice is "jellylike…. with no apparent beginning and end". In this context, chaos theory becomes more relevant in understanding complex, dynamic, deterministic, non-linear systems that reveal patterns of order out of seemingly chaotic behaviour (Cloete and de Conning, 2011:33).

Policy making takes place in a political environment (Head, 2015: 472; Cloete and de Conning, 2011: 51; Sutcliffe and Court, 2005). Dye (2013: 33-34) describes public policy making as a political process itself comprising of series of political activities that are embedded on specific policy stages. These stages are normally accompanied by political influence (Lesia, 2015: 13). Policy adoption decisions are politically motivated for political gains (Head, 2015: 477). Matshikwe (2004) suggests that policy should be viewed at three levels – political, administrative and operational levels. Political level recognises that policies emanate from the

political party manifestos and agenda; therefore, it cannot be immune to political influence (Matshikwe, 2004: 13).

Policy making takes place within the policy networks and communities (Cloete and de Conning, 2011: 53). These networks and communities are formal or informal groupings from inside or outside the public sector that exercises their influence in order to achieve a policy outcome that favours them (Cloete and de Conning, 2011: 53). This suggest that policy comes about as a result of negotiated settlement (Hogwood and Gunn, 1984: 23-24, cited in Cloete, Wissink and de Coning, 2006: 15). Dye (2013: 23), shares a similar view by highlighting that "public policy is a balance of interests group influence, policies change when particular interest groups gain or lose influence". Thus, public policy is the state of equilibrium reached after group struggle.

Successful public policy implementation is depended on effective and rational decision-making process informed by evidence. Hence, the next section will focus on interrogating the existing literature on evidence-based approach to public policy making.

SECTION B: EVIDENCE-BASED POLICY MAKING

2.6 EVIDENCE-BASED POLICY MAKING: DEFINITION, ORIGIN AND IMPORTANCE

Given the large and interdisciplinary nature of the theoretical literature on 'Evidence Based Approach', this section cannot claim to provide a full and exhaustive summary of all relevant literature. The summary will be limited to discussions that relate to policy making by providing brief definitions, unpacking evidence, putting evidence into policy, highlight relevant case studies on evidence-based policy making. The social sciences literature clearly indicates that there's a shift in public policy making process from 'opinion based' or ideology-based policy to evidence-based policy making process (Heineman, Bluhm, Peterson & Kearny, 1997; Karl, 1995; May, 1997; Kayizzi-Mugerwa, 2003; Paine Cronin and Sadan, 2015).

Evidence-Based Policy (EBP) (Sutcliffe and Court, 2005; Davis, 2004) as an emerging paradigm is sometimes referred to as Evidence-Based Practice (EBP) (Bouffard and Reid, 2012), Evidence-Based Policymaking (EBPM) (Freiberg and Carson, 2010), Evidence-Informed Policy making (EIPM) (Head, 2015), and Evidence-Informed Decision Making (EIDM) (Head, 2015; Langer, Stewart, Erasmus and de Wet, 2015), therefore providing a

comprehensively all-encompassing definition is rather impossible. However, there is consensus on what the concept means in the specific field and context in which is being applied.

2.6.1 DEFINITION OF EVIDENCE BASED APPROACHES

In order to comprehensively understand what is meant by evidence-based approach in policy formulation, it is important to commence by providing some of the existing definitions of each of these concepts as it applies to that specific field or discipline. The intention is to provide a reader with a clear distinction and similarities in these concepts, which in some cases are used interchangeably. Although there is a conscious acknowledgement that these terms are not entirely synonymous, for the sake of simplicity these terms should be viewed under the common umbrella of 'Evidence Based Policy Making' (EBPM).

Sutcliffe and Court (2005: iii) defines **Evidence-Based Policy (EBP)** as a "discourse or set of methods which informs the policy process, rather than aiming to directly affect the eventual goals of the policy. It advocates a more rational, rigorous and systematic approach". The definition is more concerned about the processes and procedures that are followed when developing the policy. Its validity and credibility are determined by the process not the content of the policy itself. This definition is informed by the assumption that if policies are based on systematic evidence, they tend to produce better results when implemented (Parsons, 2002; Banks, 2009; Strydom, Funke, Nienaber, Nortje, and Steyn, 2010; NDP, 2011; Head, 2015; Howlett and Mukherjee, 2017).

According to Davies (2004: 3), EBP is an approach that "helps people make well informed decisions about policies, programmes and projects by putting the best available evidence from research at the heart of policy development and implementation". The credibility of the policy seems to be linked to the amount of evidence that was used during policy development as well as implementation. This suggest that evidence in required in both policy development and implementation. This definition put more emphases on methodological issues rather than the actual policy output.

Evidence-Based Practice (EBP) can be defined by summarising the arguments raised by Bouffard and Reid (2012) that there is no consensus on the overall definition of this practice. Definitions varies depending on the field in which it's being applied. They provide three possible definitions. It can be described as relating to "the use of evidence to guide practice….

the use of best research evidence to guide practice… [and it should] integrate best research evidence, practitioner expertise, and participant preferences, values, and goals" (Bouffard and Reid, 2012: 4). This definition finds its origin in the field of medicine or clinical field. This is the process whereby the medical practitioners rely on best available scientific evidence to decide on a specific medical intervention. This scientific evidence might emanate from studies or monitoring and evaluation data on previous interventions.

Evidence-Based Policymaking (EBPM) can be briefly defined as an approach that "helps people make well informed decisions about policies, programs and projects by putting the best available evidence from research at the heart of policy development and implementation" (Freiberg and Carson, 2010: 153). Evidence is viewed as a tool to making informed rational decisions during policy development.

The Department of Planning, Monitoring and Evaluation (DPME, 2014: 1) defines Evidence-Based Policy-Making as "making decisions based on knowing with an estimated degree of certainty what works, at achieving which outcomes, for which groups of people, under what conditions, over what time span, and at what costs?" This definition emphasizes on the importance of context-based knowledge and information. It is definite to the specific set of beneficiaries. Consequently, evidence-based policymaking is mainly about the approach, process and procedures followed in incorporating evidence into policy making process. This can take different forms or shape. There is no standardised prescribed process to follow, therefore it can include several methods. Evidence-based policy is the output of the evidence-based policy making, which is the process. Evidence-based policy is different from evidence-based policymaking in that, it is a policy itself that came about as a result of a specific systematic process of evidence use during its development, which is the latter.

Evidence-Informed Policy Making (EIPM) can be defined as an approach to policy decisions that aims to ensure that decision-making is well informed by the best available (research) evidence (The Malawi Ministry of Health, 2016). In this context, the 'best available evidence' refers to scientific evidence which must be subjected to systematic review and any other rigorous validation process. This definition appears to be exclusive of 'other evidence' which is not scientific that may exist in the policy environment. Evidence informed policy acknowledges the complexities associated with political environment in which policy decisions are made.

In this regard, Head (2015: 472-3) argues that the exiting literature "clearly demonstrated that the neutral and objective evidence of scientific knowledge does not, and cannot, drive policy in a democratic political system. Evidence is harnessed to competing arguments about ends and means, and the political decision-making process is inherently marked by conflicts, trade-offs, and compromises". This acknowledgement suggests the need to shift from evidence-based policy to a more modest approach of evidence informed policy. Decisions should not only be based on evidence but there should be level of evidence incorporated into the policy itself. Head (2015) further stresses that because of the policy decisions taking place within a specific political system, evidence can only enhance the decision-making process, it does not drive the outcomes. This argument acknowledges the existence of other factors at play that has influence on the outcomes of the policy itself. Evidence is just one contributing factor to inform decision-making process.

Evidence-Informed Decision Making (EIDM) means "relying on transparent use of sound evidence and appropriate consultation processes, [which is] seen as contributing to balanced policies and legitimate governance. The efficiency and effectiveness goals are complemented by wider concerns to improve the perceived legitimacy of policy-making processes and civic trust in decision makers" (Head, 2015: 472). This implies that, in order to prove that a decision taken is the appropriate one, there must be proof that existing evidence was consulted. This seems to be more broadly as it can include decisions outside the policy environment.

The advocates of evidence-informed policy making claim that rigorous evaluation practices can significantly improve attainment of cost-effective outcomes. Langer, Stewart, Erasmus and de Wet (2015: 463) share similar sentiment by asserting that "[it] refers to the practice of making decisions in development policy and practice informed by the best available evidence. This practice requires the availability of high-quality and policy-relevant evidence as well as a systematic and transparent process of feeding this evidence into decision-making procedures of policymakers and practitioners". The definition prioritises the quality and relevance of evidence. Implies that not any evidence can be used but only relevant to policy and of high or required quality. This suggest that the evidence appraisal in this regard is of crucial importance.

Whether it is referred to as Evidence-Based policy (EBP), Evidence-Based Practice (EBP), Evidence-Based Policymaking (EBPM), Evidence-Informed Policy making (EIPM),

Evidence-Informed Decision Making (EIDM), the common denominator is 'Evidence' in the policy context. This implies that whatever you do should be informed or based on evidence with the intention to predict the benefits and minimise or eliminate negative consequences of the intervention. Peters, Hopkins and Barnett (2016) argues that although there is an increasing appetite to use EBP, but there is still no agreement about the actual definition of EBP. Since this study is guided by evidence-based approach to policy and public policy process as its theoretical framework, the concept of 'Evidence-Based Policy Making' will be adopted as encompassing all those other concepts.

2.6.2   THE ORIGIN OF EVIDENCE BASED APPROACH

Evidence-based policy making finds its origin from the medical field commonly known as Evidence-based medicine and Evidence-based practice. Although EBP can be viewed as a fairly new concept in the field of policy making, fields such as medicine adopted this practice as early as 1930 (Bouffard and Reid, 2012: 2). EBP is now widely accepted by practitioners in various fields and policymakers as a practice that improves the way decisions are taken. It is accepted in both economic and common-sense fronts. It is a practice that tends to put afore the benefits associated with intervention and alert of negative consequences.

The advocates of Evidence-based medicine acknowledge the shift from using intuition as enough grounds for clinical decision making to examining clinical research evidence (Bouffard and Reid, 2012). This is about using the best research evidence to justify certain practice or intervention. It is worth mentioning that, it is fairly easy to apply evidence in medical policies and practices because the goal is only to extend life (Bouffard and Reid, 2012). In other disciplines and sectors of society, the goal and intended outcomes remains the area of contestation throughout the policy development process.

The concept of 'evidence-based policy making' (EBPM) can be traced back to over a century ago in Britain and was recently made popular by the Tony Blair Government administration, which was elected on a platform of 'what matters is what works', which aimed at ending ideologically-based decision making and 'questioning inherited ways of doing things'. After its introduction in the United Kingdom (UK) in the early 1990s, EBPM expanded its influence on other English-speaking countries such as United States of America (USA), Australia and Canada. In the USA, it was institutionalised with the foundation of the US Coalition for

Evidence Based Policy in 2001 that aim at increasing government effectiveness using rigorous evidence about what works (De Marchi, Lucertini and Tsoukiàs, 2014: 24).

Kalle and Ejnavarzala (2016: 41-42) argues that the UK government has defined evidence as not only scientific but also encompassing the "expert knowledge; published research; existing research; stakeholder consultations; previous policy evaluations; the Internet; outcomes of consultations; costing of policy options; output from economic and statistical modelling". This definition is seen to be the most comprehensive and all-inclusive in that, it moves beyond the conversional evidence-based policy which narrowly defines evidence.

Punton, Hagerman, Brown, Echt, Fisher, Lloyd, Morton and Vogel (2016:19) argues that the growing demand for policies to be informed by evidence are often "driven by a growing focus on the need for robust decision making, accountability to funders, and pressures to ensure taxpayers' money is spent on policies that work". Evidence-informed policy making is characterised by the systematic and transparent access to, and appraisal of evidence as an input into the policy-making process (Malawi Ministry of Health, 2016: 13).

2.6.3   THE IMPORTANCE OF THE EVIDENCE BASED APPROACH

Policy development should not be based on theories alone because theories themselves can be subjected to serious scrutiny and debate in a sense that the outcome of such constitutes a form of evidence itself that can give some assurance to policy makers on what are the likely policy impacts to society. It is also arguable that sometimes there is no enough time to search for evidence when developing a policy. Banks (2009: 6) further argues that even if that's the case, most policies are experimental in nature and therefore must be monitored and evaluated over time, so that they can be corrected or terminated on time if they turn out to be failures. Evidence-based policy making approach is therefore seen as mechanism to improving public policy making (Parsons, 2002: 44).

The rationale behind EBP is that policy decisions should be informed by available evidence and should include rational analysis, because public policy that is developed based on systematic and strong evidence is more likely to produce better outcomes (Paine Cronin and Sadan, 2015). The EBP approach to policy seeks to ensure that policy outcomes are successful. Too often policies are formulated and implemented, but the intended results are not met (Makae, 2009 and Majola, 2014). Focusing on evidence when developing policy ensures that policy development initiatives will address the problems identified in society. Figure 2 below

attempts to put this argument within the conversional policy making process based on the generic model.

Figure 2: The 'Ideal' Evidence based policy making process
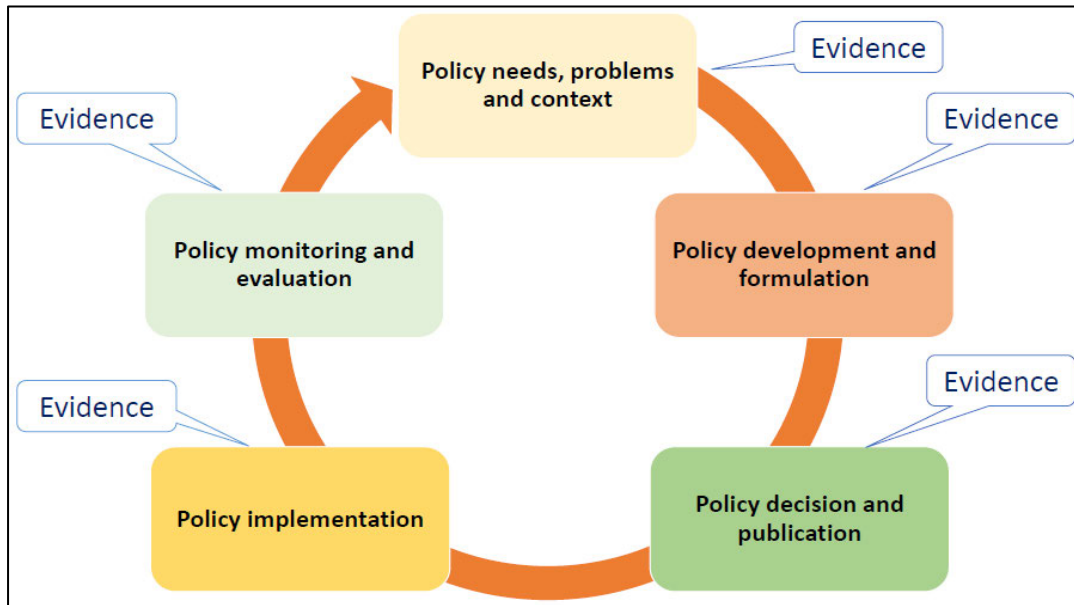
Source: Ile, Eresia-Eke and Allen-Ile. (2012:5) Howlett and Mukherjee (2017: 506).

2.6.4 UNDERSTANDING EVIDENCE IN PUBLIC POLICY CONTEXT

The is no consensus in the academic fraternity on a common definition of evidence, however, the oxford dictionary defines evidence as "information indicating whether something is true or valid…information used to establish facts in a legal investigation or to support a case in a law court" (Oxford dictionary, 2003: 305). Simply put, evidence is information or data that supports, or rejects, a certain position. The Department of Planning, Monitoring and Evaluation acknowledges that there's a considerable disagreement on what constitutes evidence in public policy making.

There is often disagreement agreement on what counts as 'evidence' – scientific, legal, political, lay (everyday) evidence. However, the consensus is that evidence can be both qualitative and quantitative and its permissibility is dependent on where the evidence will be used. Evidence alone "merely provides its user with information on what is likely to happen if certain actions are undertaken" (DPME, 2014: 2). This simply means that other factors come in from the policy makers such as experience, expertise, available resources, beliefs, values and priorities within a specific political environment. The existing debate on evidence-based

policy and practice has not provided details on whether the experience and expertise can be considered as evidence.

A substantial and sophisticated literature has grown up around the question of what, for the purposes of EBP, should constitute 'evidence'. According to Hammersley (2005: 86) "evidence-based practice movement argues that policymaking and practice should be based on *research* evidence presented in the form of *systematic reviews*, in other words syntheses of the findings from all relevant studies meeting some threshold of methodological rigour". It is based on such assertions that the opinions differ in terms of what constitutes evidence. This is since evidence-based practice finds its origins from the medical field but has since expanded to other disciplines such as education, criminology, social work, etc.

In view of the above literature, this thesis chose to borrow a description of Marais and Matebesi (2012) as the definition of evidence. Marais and Matebesi (2012) when assessing the level of evidence-based decision making in respect of the development of Provincial Growth and Development Strategies (PGDSs) in South Africa, they concluded that in this context, evidence was regarded as 'official statistical data', 'official government policies', 'government research outputs', and 'scientific research from universities and non-governmental organisations'.

2.6.4.1 Evidence fit for public policy decision making

Banks (2009: 5) argues that "Without evidence, policy makers must fall back on intuition, ideology, or conventional wisdom — or, at best, theory alone. And many policy decisions have indeed been made in those ways. But the resulting policies can go seriously astray, given the complexities and interdependencies in our society and economy, and the unpredictability of people's reactions to change". Further argues that policies that have not been informed by good evidence and analysis fall more easily prey to the 'Law of Unintended Consequences'. Meaning that are more likely to yield unintended result, either by not addressing the identified mischief or by exacerbating it.

Head (2015) argues that good evidence should pass the test of scientific systematic review. Furthermore, there's an acknowledgement of the existence of two streams in this regard. The first viewpoint believes that with 'good evidence', "evidence-based approaches are possible but require a significant commitment to rigorous methodologies for program evaluation" whilst

the contrasting viewpoint suggests that "good decision making should be informed by a range of relevant 'best available' evidence" (Head, 2015: 473-4).

The arguments around the appropriateness and relevance of evidence is being dismissed as a none-issue because evidence is always subjective and is context bound. Evidence emanating from theoretical and empirical studies constitute only one aspect of knowledge crucial to complete the policy process. This narrative is summarised by Punton, Hagerman, Brown, Echt, Fisher, Lloyd, Morton and Vogel (2016: 17) by arguing that "*appropriateness* of evidence may be more important than its position on a generic evidence quality hierarchy, and several writers argue that contestation over evidence interpretation is inevitable given that evidence is never neutral".

Based on the above narrative, it can be concluded that good scientific evidence should be based on a scientific, independent, academic, rigorous methods that can be subjected to validation and open to scrutiny and critique. It is worth noting that the above relates to only 'good scientific evidence'. No criteria have been set on how to examine other types of evidence such as existing knowledge, experiences, values and beliefs, etc. Such kind of evidence cannot be subjected to the same scrutiny as it is not informed by any scientific, independent, academic, rigorous methods.

2.6.4.2 Barriers and limitations to use evidence

Marais and Matebesi (2012), when assessing evidence-based policy development in South Africa, discussed several limitations in relation to the use of research evidence to develop policies. The first aspect of limitations was based on the United Kingdom (UK) experiences as part of their literature review. They range from consensus on evidence-based process, what constitutes evidence, selective use of evidence, political influence on evidence, whether monitoring and evaluation can provide enough evidence, researches not conducted only to inform policy decisions, etc.

Marais and Matebesi (2012: 362) concludes that there's an acknowledgement that research is still playing a minimal role in policy development in South Africa, and this is due to "the fact that the goals of policy makers are complex and mostly difficult to test, research is easily labelled as irrelevant, there is seldom consensus in respect of research, there is commonly a range of competing evidence or the existing knowledge is of poor quality". This suggests that

there is a gap between research and policy. In order to close this gap, limitations relating to capacity and competencies of policy practitioners to link scientific research with the policy problem needs to be addressed. Translating and converting the evidence into a solution. Evidence does not solve policy problems, but it provides scientific knowledge which is open to interpretation and relevant for scenario planning.

In this regard, Marais and Matebesi (2012) concluded that the relationship between policy makers and researchers is that of contestation and competing rather than cooperation. This was clearly articulated by their respondent when stating that "We are talking of two camps here. On one side, you have academics who base their assumptions on hard evidence found after a series of strict scientific standards and methods and theory. On the other side, you have government officials and politicians who are, in all fairness, only interested in practical issues and solutions" (Marais and Matebesi, 2012: 365). However, this is not new in the policy environment as stakeholders and actors continuously persuade each other during the process (Birkland, 2011). In this case, evidence becomes a tool for persuasion of one by the other.

The second challenge relates to the policy-maker's capacity to comprehend the relationship between research and policy. Capacity in this respect seems to be limited, concludes Marais and Matebesi (2012). This is exacerbated by the predominant assumption by policy practitioners that the policy process is linear. The lack of understanding where to pin evidence in the conventional policy making process.

Marais and Matebesi (2012) found that government officials or policy makers often dismiss or regards scientific academic research findings as irrelevant based on scientific methods and theories not reality. This emerges from Marais and Matebesi (2012: 366) as one of their respondent's asserts that "many academics fail to move beyond theory and unfortunately government is guided by evidence, which is measurable and practically feasible to implement". This points to the fact that research output should not only be scientifically sound, rather also make recommendations that are easy to understand and translatable into implementable actions, on one hand. On the other hand, points to the need to invest in up skilling policy practitioner for them to be able to translate those scientific research recommendations into implementable actions.

The lack of in-house research capacity to either conduct research or to develop a clear comprehensive research agenda for government is also one of the limitations identified by Marais and Matebesi (2012). This relates to the capacity to conduct research or identifying research requirements for government. In turn, poor or no research conducted in government departments to inform policy development.

All these barriers suggest that there is a need to develop and adopt strategies that are aimed at bridging this gap. They are clearly putting research and policy at the far two ends of the spectrum. In bridging this gap, need to understand that policy can be informed by evidence that emanates from 1) policymaker initiated empirical research, 2) researcher initiated empirical research, and 3) problem-specific past interventions. There is a need for a researcher-policy maker interface.

2.6.5   HOW EVIDENCE INFORMS DECISION MAKING

Evidence-based policy making should not be viewed as a mere staged process rather as one of the determinants that influences the policy outcomes. Advocates of evidence-based policy making commences by dismissing the linear/rational model of policy making process. The critics argues that the model disregards the complexity of policy process and its reliance on the notion of rational decision-making that those 'decisions are purposive choices made by informed, disinterested, and calculating actors working with a clear set of individual or organisational goals (Freiberg and Carson, 2010: 159).

Based on these critics, a five-fold typology model describing the relationship between policy and knowledge was designed by Young (2002) and his co-workers at the United Kingdom Centre for Evidence Based Policy and Practice as an alternative model

1) *the knowledge-driven model* in which research leads policy. This model contains an element of scientific inevitability, with the expert 'on top' and, in extreme form, the abdication of political choice in favour of science;
2) *the problem-solving model* in which research follows policy, and policy issues shape research priorities. Experts are 'on tap' rather than 'on top 'and specific pieces of research (evidence-gathering) are used to assist policy formulation and implementation;
3) *the interactive model* where research is one of many factors in a 'much more complex and subtle set of relationships between decision-making and research';

4) *the political/tactical model* is one that 'sees policy as the outcome of a political process' which also drives the research agenda in a politically instrumental fashion; and

5) *the enlightenment model* which has research affecting the way in which issues are framed. Rather than research serving policy agendas in direct fashion, the benefits are indirect. Research and evidence subsequently derived do not address the decision problem itself, but the context within which that decision will be taken. They provide a frame for thinking about it and seek to illuminate the landscape for the decision-makers (Young et al. 2002: 216–217, in Freiberg and Carson, 2010: 159-160).

These models provide different perspectives on the assumptions of how evidence is believed to be informing policy process. They are trying to balance between the influence of expertise and that of authority.

Contrary to this, Newman (2018: 1109) argues that there is no need to continue convincing policy makers to use evidence by asserting that "If evidence is good for policy—that is, if it is true that more and better evidence, applied correctly, will improve policy outcomes and ultimately improve people's lives—then policy-makers should be the ones to ensure that policy is based on evidence". However, Kalle and Ejnavarzala (2016) in their assessment of whether evidence-based policy making is an adequate framework: the case of Moratorium on Genetically Modified Brinjal in India, submits that there seems to be contestation on the adequacy of the dependency on scientific evidence alone and as such, there is a need to further interrogate it, especially in the context of science-society interface.

According to Mihalicza, Leys, Borbás, Szigeti, Biermann and Kuchenmüller (2018) the shift from the so-called 'narrow' approach of evidence-based policy to a more pragmatic concept of evidence informed policy is another way to emphasise the fact that evidence is only one element in policy decision making process along side with other factors. Young, Gropp, Pintar, Waddell, Marshall, Thomas, McEwen and Raji (2014: 584) further elaborate on this view by arguing that "scientific evidence is only one 'lens' used by policy-makers to support their decisions…other factors, including practicality and local applicability of options, economics, political considerations and timing, informal knowledge and experience, public acceptability, and stakeholder or lobbyist influences, are also considered in the policy-making process".

Peters, Hopkins and Barnett (2016: 145) argues that whether referred to as Evidence-Based Policy or Evidence-Informed Policy, it remains crucial to note that it is both a model and a process with specific sets of steps that needs to be followed. They suggest the following seven steps of EIP, namely:

1. Becoming motivated to apply EIP;
2. Converting information needed into an answerable question;
3. Tracking down the best evidence (quantitative and qualitative) to answer the question;
4. Critically appraising the evidence for its validity, impact and applicability;
5. Integrating critical appraisal with practitioners' experience, clients' strengths, values and circumstances;
6. Evaluating the effectiveness and efficiency in exercising the previous steps;
7. Teaching others to follow the same process.

Based on the arguments raised in the discussion above, it emerges that the integration of evidence into decision making does not take place outside of the conventional policy formulation process. The recommendations do not in any way suggest the replacement of the existing policy formulation models, rather supplements and enhance the models. However, what is not clear is the way their proposals fit into the conventional policy making models. There is still no clarity on whether evidence is crucial at the specific stage of policy formulation or all stages of policy formulation process requires evidence. In this regard, evidence is considered in its entirety, different forms and source.

Punton, Hagerman, Brown, Echt, Fisher, Lloyd, Morton and Vogel (2016) concur that it is impossible to establish and adopt a single framework given the complexities of policy making process and varieties of evidence. Many political institutions claim facilitating the use of best available scientific knowledge in policy decision making but to determine which evidence informed a specific policy and how it contributed is rather difficult if not impossible (Dicks, Hodge, Randall, Scharlemann, Siriwardena, Smith, Smith and Sutherland, 2014). Medical practitioners have a well-established routine model in which studies are evaluated for evidence and synthesised in a systematic review process which are then translated into synopses. Synopses are considered crucial elements of evidence-based policy framework.

2.6.6 RESEARCH, POLICY AND EVIDENCE NEXUS

In this context, evidence for policy making appears to be classified as knowledge emanating from scientific research. However, there are also areas of contestation that further interrogates the credibility of 'scientific evidence' in social research. The most popular criticism comes from constructivist and post-modern perspectives (Marais and Matebesi, 2012). Constructivists argues that knowledge cannot provide context in which policies are developed because knowledge itself in socially constructed. According to Marais and Matebesi (2012: 360) knowledge "is socially and culturally constructed and varies accordingly. Claims towards generally accepted aspects of policy for all people and in all conditions are thus unfounded".

The post-modern perspective takes the criticism even further by questioning the objectivity of the social research and argues that it might reflect the researcher's 'metatheoretical assumptions', therefore it cannot provide total certainties (Marais and Matebesi, 2012). Based on these two major critics of evidence-based approach to policy making, Marais and Matebesi (2012), informed by arguments from Sanderson (2002), concludes that, despite these sharp critics of the approach, the "systematic knowledge of the human system is possible and that such knowledge could be helpful" (Marais and Matebesi, 2012: 360). This, in a way, is further acknowledgement that scientific research output is just one factor in policy development process. There are others that also contributes in shaping the policy outcomes.

Freiberg and Carson (2010) argues that, as it is the case in other parts of the world, the evidence-based research/policy nexus in Australia is also emerging in the field of criminology as it also draws from the medical model. More details of this case study will be provided in the later section that deals with evidence-based case studies. This suggests that although there are critics of use of evidence in policy making, the shift or evolution towards evidence-based policies and practices is evident and is expanding from one discipline to another. This is despite the acknowledgement by Freiberg and Carson (2010: 156) that "the relationships between research, knowledge, policy and practice are always likely to remain loose, shifting and contingent".

Notwithstanding the above critics, Marais and Matebesi (2012) still suggest that there is still a possibility to harmonise these into a seamless implementable process. They identify five areas that requires special attention and consensus amongst 'stakeholders within given service area'.

In other words, a multidisciplinary stakeholders and actors involved in policy development must commit in finding common grounds in specific competing or grey areas.

These areas include, firstly, the acknowledgement and admission that research findings are not everything in policy development process but just one factor that contributes to the whole process. Secondly, that the same research findings or evidence can be used by different role players differently in the policy development process, depending on their interests. Thirdly, consensus on what constitutes evidence in the given field and how it will be used in the policy development process. Fourthly, it appears that research is still supply driven, so there is a need to change into a demand driven kind of research. And lastly, evidence suggests that longitudinal multi-disciplinary scientific researches prove to stand a better chance in influencing policy output (Marais and Matebesi, 2012: 360-361). Consensus in these areas will provide a firm foundation towards agreement on methodological issues on what, how, when and where evidence or research findings is used.

It is worth mentioning that the analysis provided by Marais and Matebesi (2012) in their investigation of evidence-based policy development in South Africa, places scientific research (by academics) at the bottom of the list of all other sources of evidence that provincial governments engaged in developing their Provincial Growth and Development Strategies (PGDS). In addition, of concern was the nature in which this evidence was sought. They argue that there were "research outsourced specifically for the PGDS (Western Cape) and research partnerships (Gauteng, North West and the Free State), and the appointment of academics to be involved directly in the compilation of the PGDS" (Marais and Matebesi, 2012: 364).

2.6.7 LINKING EVIDENCE AND POLICY OUTCOME

The evolution towards a more evidence-based policy and decision making is becoming more and more robust owed to the modernist world view. Evidence-based practice originates from the medical field and has since expanded to other fields such as public policy. But the question is why the shift? Is it informed by assumptions or facts that if a decision is informed by evidence is guaranteed to solve societal challenges?

The main underlying assumption of the advocates of evidence-based policy is that, the more evidence you have makes it more likely and easy for all the actors in the policy process to find

each other and reach more rational policy decision. Punton, Hagerman, Brown, Echt, Fisher, Lloyd, Morton and Vogel (2016: 20) supports this assumption by arguing that the "quality criteria also often refer to the 'size of the evidence base', underpinned by the assumption that studies can be 'added up' to generate more reliable findings".

On the contrary, Tenbensel (2004:190) warns that it is also crucial to be cautious about the type and amount of evidence, because "the relationship between different types of evidence in the policy process is incoherent and potentially conflictual". Tenbensel (2004) concludes by suggesting that the amount of policy-relevant evidence has no bearing in arriving at more rational and political immune policies, by arguing that it doesn't matter the "efforts to gather more policy-relevant evidence, in themselves, are unlikely to lead to policy making that is more rational and less political" (Tenbensel, 2004: 206). What can be deducted from these assertions is the fact that the focus should not be on the amount of evidence gathered that makes policies more evidence-based, but the type and relevance of knowledge and evidence to the policy itself. This now diverges the focus from the evidence itself to the capacity of policy makers to make crucial determinations on which evidence is relevant and which evidence to exclude from the policy process.

Head (2015) locates the debate about the use of evidence within the context of improved effectiveness in service delivery and accountability in democratic countries. Argues that democracies and institutions are adopting the evidence-based approach because they aimed at improving their organisational efficiencies and effectiveness in providing services. This position is also supported by Freiberg and Carson (2010: 161) when asserting that "a reasoned and open dialogic process of policy formulation would not only generate a better model of evidence-based policy but also a greater likelihood of such policies achieving their expressed objectives".

The additional source of evidence for the development of policies can also be derived from the experiences of others. Similar interventions or programmes implemented elsewhere can also be replicated in other areas subject to its relevance and applicability. However, Head (2015: 477) cautions that "policy borrowing, and diffusion have been widely undertaken across many fields, but many adoption decisions are politically driven rather than evidence based in design and implementation. The inherent problems and pitfalls of policy transfer and diffusion are well documented and making appropriate choices can be fraught with risks".

Furthermore, it is worth noting that not all evidence is equal, some is more credibly, reliable and valid than others. In this instance, evidence emanating from scientific research seems to be ranked high if compared with other sources of evidence. However, Sutcliffe and Court (2005: iv) stresses that "policy should be informed by a wide breadth of evidence, not just hard research". Evidence is different from opinion in that it meets the standards of internal validity, adequacy of reporting, and external validity while opinion are just statements and claims that do not meet the standards of evidence.

In evidence-based policy making, policy makers need to consider the 'scenario planning' when making policy decisions which includes commissioning new research and consulting relevant experts, as well as evaluating the outcomes (Howlett and Mukherjee, 2017: 506). They further argue that evidence-based policy making should be able to "systematically match every stage of policy making process with a specific form of evidence in order to make that policy fully effective" (Howlett and Mukherjee, 2017: 506).

SECTION C: CASE STUDIES
2.7   EVIDENCE BASED POLICY MAKING: CASE STUDIES
2.7.1 Canadian Case Studies

Hammersley (2005) – This study responds to Iain Chalmers (2003), article, 'Trying to do more good than harm in policy and practice: the role of rigorous, transparent, up-to-date evaluations'. Conducted in the field of medicine. It was triggered by the fact that "many clinical judgments were not based on up-to-date research evidence" (Hammersley, 2005: 86).

Amongst the emerging areas are: **The role of research evidence in policy making against other sources of evidence.** A systematic process that ensures transparency and rigour remains crucial (Hammersley, 2005: 86). Research information should be presented as reviews to ordinary people not as findings from a specific study. This is so because "reviews are an essential bridge between the worlds of research and those of policy making and practice" (Hammersley, 2005: 87). In sharp contrast with Iain Chalmers (2003) view on role of research in informing policy, Hammersley (2005: 88) argues that information from various sources must be used. Evidence emanating from research, including systematic reviews, is still subjected to policy maker's critical assessment that can be based on experience and background knowledge.

The assumption that research evidence is always available and supersedes other kinds of evidence is misleading.

Hammersley (2005) acknowledges that research evidence may play a bigger role in one discipline like medicine but the same cannot be said in a different filed such as social work or education based on the nature of the problem to be addressed and the circumstances. In terms of the role of evidence, Hammersley (2005) concludes that sound judgements and decisions can only be made if research evidence and its implications is evaluated within the context of other existing information (Hammersley, 2005: 89). Argues that like any other human practices, research also relies on individual judgements and interpretations.

Bouffard and Reid (2012) further extends the analysis of evidence-based practice in the field of medicine. They highlight some key fundamental questions about the practice with the intention to point out the gaps and concerns about the EBP. They view EBP as a discipline with complexities that needs to be understood before its implemented (Bouffard and Reid, 2012: 3). Amongst the key questions **is what counts as evidence?** Definition of what counts as evidence is dependent on the researcher's assumptions and school of thought (Bouffard and Reid, 2012: 6). For example, pragmatists believe on what works as evidence not how it works, whilst realists argue that "we have no evidence until we have a credible explanatory theory" (Bouffard and Reid, 2012: 6). **What Are the Rationales Behind the Different Hierarchies of Evidence?** Bouffard and Reid (2012) dismisses any narrative behind the introduction of evidence hierarchies because they believe that the discussion should be about how to integrate sources of evidence than ranking them. **Are Most Research Results Universal or Contextual?** The existing assumption is that most research results are generalisable (Bouffard and Reid, 2012: 8). Bouffard and Reid (2012) believe that results from natural science are generalisable compared to results from social sciences because "It cannot be assumed that all research results, irrespective of the "quality of inquiry," are generalizable and hence useful knowledge that can be applied. Many research results, particularly in the human sciences, may only have contextual applications" (Bouffard and Reid, 2012: 8).

Should All Decisions About What Works Be Evidence-Based? Bouffard and Reid (2012: 9) submits that "if there are good reasons to believe that a nonempirically supported intervention can produce beneficial effects, then the decision to use it or not must be contextual and based on assessment of the costs and benefits". **Why Is Evidence-Based Practice not**

Evidence-Based? Evidence-based practice have not been tested for efficiency and effectiveness. Before EBP is implemented, there's a need to assess whether "it works better than the best alternative approach" (Bouffard and Reid, 2012: 10). Should We Endorse Current Governing Practices? Organisations, institutions and disciplines should not be coerced to adopting the evidence-based practice in its current state, rather encouraged to make their own determinations (Bouffard and Reid, 2012: 12).

Will Evidence-Based Practice Work? The question is mainly about, does evidence-based practice really leads to better policies or practice? This remains an assumption because it has not been empirically proven (Bouffard and Reid, 2012: 13). Bouffard and Reid (2012: 14-15) caution that this "does not mean that evidence should not be used. It means that we should be cautious when using them. Even carefully planned interventions may not produce the desired effect and lead to negative outcomes. Even if we use the best evidence available (whatever that is), we will need to regularly monitor interventions and be ready to alter or stop them". Bouffard and Reid (2012) concludes that there have been improvements in EBP over the years but still believes that the practice should remain open for continuous improvements and modifications as per discipline and context.

Young, Gropp, Pintar, Waddell, Marshall, Thomas, McEwen, and Raji (2014) conducted a qualitative descriptive study of agri-food public health policy-makers and research and policy analysts in Ontario, Canada, to understand their perspectives on how the policy-making process is presently informed by scientific evidence and how to facilitate this process. In this study, data was collected through a combination of focus groups and semi structured interviews. Thematic analysis of the focus group and interview transcripts were conducted to identify the key concepts and themes related to participants' perceptions about EIPM and how to facilitate this process. Six thematic areas related to participants' perceptions about EIPM and key principles necessary to facilitate this process were identified. Those themes are: Identify the policy objectives and context; Support policy with credible and trustworthy scientific evidence; Integrate scientific evidence with other diverse policy inputs; Communicate scientific evidence in relevant and user-friendly formats; Create and maintain relationships between science and policy stakeholders, and; Enhance organizational capacity and individual skills.

Young, Gropp, Pintar, Waddell, Marshall, Thomas, McEwen, and Raji (2014) concluded that "Using credible evidence and integrating it with diverse policy inputs, enhancing research and policy communication and relationships, and developing organizational capacity and individual skills are all key components of the successful adoption and establishment of EIPM… enhanced education and training in both research and policy realms will be necessary to facilitate EIPM in this sector" (Young, Gropp, Pintar, Waddell, Marshall, Thomas, McEwen, and Raji, 2014: 587-588).

2.7.2 Australian Case Studies

Freiberg and Carson (2010) interrogates evidence-based policy in criminology in Australia. They argue that evidence alone is unlikely to be the major determinant of policy outcomes and there's a need for a different kind of evidence-based modelling that will consider other factors such as emotions, symbols, faith, belief and religion in the criminal justice system. There's an acknowledgement of the growth of the contemporary evidence-based policy (EBP) movement. Models to implement it varies across disciplines and context (Freiberg and Carson, 2010: 153).

On the question of what should constitute evidence, Freiberg and Carson (2010: 155) dismisses the rational view of evidence integration into policy as a linear process instead recognize that evidence can be ahead of policy making or evidence can be generated while developing the policy and assist to meld it. They conclude that evidence should be collaborative of what exist in the context, be democratized and be known by all in the society, must take a communicative, discursive and dialogical approach. This approach should go beyond the traditional consultation process to interest groups and stakeholders becoming an integral part of the process of generating and facilitating evidence use (Freiberg and Carson, 2010: 161).

In the assessment of the utilization of evidence for policy development, Head (2015), commences by arguing that government agencies gather and assess a significant amount of information but there has been little analysis of how this information is utilized for policy and program improvement. In undertaking this exercise, four thematic areas emerges, which are: (1) the prospects for improving "evidence-informed" policy making, (2) the diversity of practices concerning evidence utilization and evaluation across types of public agencies and policy arenas, (3) recent attempts to "institutionalize" evaluation as a core feature of policy development and budget approval, and (4) the relationships between public agencies and nongovernmental sources of expertise.

Head (2015) reaches the following conclusions: from the evidence supply side, there's a serious lack of funding for information collection whereas from the demand side, there's lack of trust of information from external sources; government agencies do collect and process huge amount of information but there's no evidence of its use in policy making process; political leaders and legislators are still concerned about the public opinion compared to what the data is presenting.

Amongst recommendations for future research, Head (2015) suggests comparative studies on the following issues as they relate to assessing evidence-based policy making in government agencies: Sources of variation in the capacity of public agencies to access and use expert evidence and research-based studies; Exemplary practices wherein public officials and leaders appreciate the contribution of rigorous research and work closely with researchers in setting research agendas; The capacity of researchers to give priority to key issues of interest to policy makers and better communicate the implications of their research through improved linkages to policy communities; The mechanisms through which the political and governmental systems provide support for open circulation of ideas/ information and public investment in rigorous research programs.

The recommendations raised by this case study are briefly covered by the studies conducted in Africa that will be discussed below. Uzochukwu, Onwujekwe, Mbachu, Okwuosa, Etiaba, Nyström and Gilson (2016) (Nigeria) Paine Cronin and Sadan (2015); Marais and Matebesi (2012) (South Africa).

2.7.3 African Case Studies

In the African continent, it is evident that despite the expansion of evidence-based approach to policy making and the modernisation of policy development process, "the gap between research and policy and practice is still very wide, especially in low and middle-income countries" (Uzochukwu, Onwujekwe, Mbachu, Okwuosa, Etiaba, Nyström and Gilson, 2016: 2). This is largely because policy makers and researchers fail to understand the synergy between the two (Uzochukwu et al., 2016). They view each other as responsible for their own respective outputs instead of them engaging in a continuous process. This kind of behaviour negatively impact on every small chance that may emerge for these practitioners to find each other.

Based on the case study conducted by Uzochukwu et al. (2016:4-8) on the challenges of bridging the gap between researchers and policy makers in Nigeria, they argue that there are four main strategies of getting research to policy and practice. Those strategies are: 1) policymakers and donors seeking evidence from researchers where stakeholders request evidence on implementation/scaling up; 2) involving stakeholders in designing objectives of a research and throughout the research period: 3) facilitating policy maker-researcher engagement in best ways of using research findings to influence policy and practice; 4) active dissemination of research findings to relevant stakeholders and policymakers. Figure 3 below summarises the correlation between these strategies.

Figure 3: The Four Strategies of putting evidence into policy
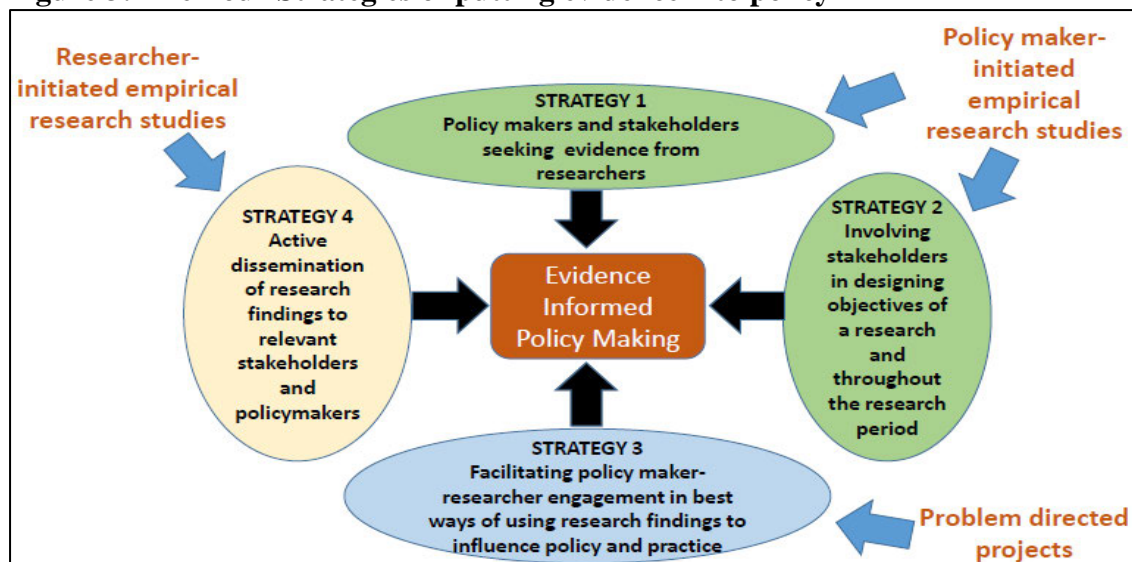
Source: Uzochukwu et al. (2016:4-8)

There were only three case studies on evidence-based practice and policy that were identified in the existing literature in South Africa. It is prudent to mention that these studies' questions and objectives are far different from each other and none of them was in the water and sanitation policy. They also vary in terms of their approach, design and methodology. Those studies are; Lukey (2016), 'The promotion of evidence-based policy making'; Paine Cronin and Sadan (2015), 'Use of evidence in policy making in South Africa: An exploratory study of attitudes of senior government officials'; and, Marais and Matebesi (2012), Evidence-Based Policy Development in South Africa: the Case of Provincial Growth and Development Strategies.

To date, aside from the abovementioned studies, little is known of how evidence-based approach is being applied in various sectors of society, and of interest for this study, in water and sanitation sector. Although national institutions may claim that their policies are informed by evidence, but no evidence exists to this effect. None of these South African case studies undertake an assessment of policy making process in a specific sector with the intention of improving the existing process towards an evidence-based policy making. They are mainly concerned about awareness and perceptions of public officials and government policy practitioners.

2.8 CONCLUSIONS FROM THE CASE STUDIES

This study came across a number of published studies conducted abroad on evidence-based practice and policy making, like the work of Tenbensel (2004) in New Zealand, Hammersley (2005) in Canada, Sutcliffe and Court (2005) in United Kingdom, Banks (2009) in Australia, Freiberg and Carson (2010) in Australia, Bouffard and Reid (2012) in Canada, Young, Gropp, Pintar, Waddell, Marshall, Thomas, McEwen and Raji (2014) in Canada, Head (2015) conducted in Australia.   These studies are from various fields such as medicine, criminology, psychology, social work, etc. The findings of these studies suggest that policy decisions that are informed by evidence (in its various forms) are more effective and further advocates for the advancement of the practice.

Although the concept of evidence-based approach to policy decision making is quite new in African countries, there are few studies that were traced during the course of this study, such as Punton, Hagerman, Brown, Echt, Fisher, Lloyd, Morton and Vogel (2016); and Uzochukwu, Onwujekwe, Mbachu, Okwuosa, Etiaba, Nyström and Gilson (2016); Lukey (2016); Paine Cronin and Sadan (2015); Marais and Matebesi (2012). Sutcliffe and Court (2005) acknowledges that policymaking is inherently a political process, therefore the better use of evidence during this process should be geared towards dramatically helping reduce poverty and improve economic performance and standing of the society.   They further argued that the increased use of evidence in developing countries also comes with some economic, social and political challenges that relates to limited capacity generate rigorous evidence and policy formulation as well as scarce or limited resources (Sutcliffe and Court, 2005: 2).

The preceding section reflected on a number of international (Tenbensel, 2004; Hammersley, 2005; Sutcliffe and Court, 2005; Banks, 2009; Freiberg and Carson, 2010; Bouffard and Reid,

2012; Young, Gropp, Pintar, Waddell, Marshall, Thomas, McEwen and Raji, 2014; Head, 2015), regional (Punton, Hagerman, Brown, Echt, Fisher, Lloyd, Morton, and Vogel, 2016; and Uzochukwu, Onwujekwe, Mbachu, Okwuosa, Etiaba, Nyström, and Gilson, 2016) and national (Lukey, 2016; Paine Cronin and Sadan, 2015; Marais and Matebesi, 2012) studies have been conducted on evidence-based policy making in various sectors to investigate factors affecting and facilitating the use of evidence to inform policy making.

Based on the consulted literature, no previous studies have investigated evidence-based policy making in the water and sanitation sector, and such study is needed to identify key factors necessary to enhance policy development and design in this sector. Young, Gropp, Pintar, Waddell, Marshall, Thomas, McEwen, and Raji (2014) recommends for future studies in evidence-based policy to investigate and validate these findings in other countries and settings and among larger, representative samples of stakeholders, while also considering participant characteristics such as area of expertise, years of experience and other potential modifying factors (Young, Gropp, Pintar, Waddell, Marshall, Thomas, McEwen, and Raji, 2014: 588).

Head (2015) suggests comparative studies on the policy maker's capacity to utilize available evidence, bridge the gap and facilitate researcher-policymaker engagement. Similar recommendation was made by Marais and Matebesi (2012) in relation to bridging the gap between the researchers and policy makers when they concluded that "evidence-based policy making requires a mature relationship between policy makers and researcher(s)—one in which the parties are willing to listen to one another" (Marais and Matebesi, 2012: 370). Paine Cronin and Sadan (2015) concluded that there was overwhelming agreement on the importance and urgency for change in the way policies are currently crafted. However, cautions that "that simply transplanting EBPM reforms applied by other countries is not likely to have the kind of impact required to improve policy outcomes" (Paine Cronin and Sadan, 2015: 9) …. Therefore, changes and reforms should be detected by the prevailing context.

2.9 EMERGING THEMES AND CONCEPTS

This section will reflect on the themes that emerges from the above literature review, more specifically in relation to evidence-based policy making and the objectives of the study. The identified themes are aligned to the objectives of the study, therefore will assist in arriving at those study objectives.

2.9.1 UNDERSTANDING WHAT COUNTS AS EVIDENCE IN EVIDENCE-BASED POLICY MAKING

Definitions of what counts as evidence is dependent on the researcher's assumptions and school of thought (Bouffard and Reid, 2012: 6). For example, pragmatists believe on what works as evidence not how it works, whilst realists argue that "we have no evidence until we have a credible explanatory theory" (Bouffard and Reid, 2012: 6). Punton, Hagerman, Brown, Echt, Fisher, Lloyd, Morton and Vogel (2016) disputes that narrative that evidence should be determined by the systematic process of reviews but asserts that evidence varies, and context specific. What is deemed appropriate in a given context, should be regarded as evidence (Punton, Hagerman, Brown, Echt, Fisher, Lloyd, Morton and Vogel, 2016: 17). On the contrary, Head (2015) advocates for the use of scientific systematic reviews to determine what can be regarded as evidence. Based on these arguments, there is no common definition of what is regarded as evidence. Therefore, evidence can be defined differently based on the discipline and context in which it is applied.

2.9.2 BRIDGING THE GAP BETWEEN RESEARCH AND POLICY

Hammersley (2005) argues that research information remains critical in the policy making process, however it must be converted into evidence by subjecting research findings to systematic reviews. In this way, it will bridge the existing gap between researchers and policymakers. Hammersley (2005) concede that research evidence might play a bigger role in discipline like medicine but the same might not be said in education. Hammersley (2005) concludes that sound judgements and decisions can only be made if research evidence and its implications is evaluated within the context of other existing information (Hammersley, 2005: 89). Argues that like any other human practices, research also relies on individual judgements and interpretations.

Young, Gropp, Pintar, Waddell, Marshall, Thomas, McEwen and Raji (2014: 584) further elaborate on this view by arguing that "scientific evidence is only one 'lens' used by policy-makers to support their decisions…other factors, including practicality and local applicability of options, economics, political considerations and timing, informal knowledge and experience, public acceptability, and stakeholder or lobbyist influences, are also considered in the policy-making process".

Uzochukwu et al. (2016) acknowledges the existence of the gap between the research world and the world of policy as argued by Hammersley (2005). Uzochukwu et al. (2016: 2) submits that the gap between research and policy is much wider in low and middle-income countries. And they conclude that is because there is a lack of understating of benefits and opportunities associated with collaboration between the two worlds.

In order to bridge this gap, Uzochukwu et al. (2016) proposes the following strategies: 1) policymakers and donors seeking evidence from researchers where stakeholders request evidence on implementation/scaling up; 2) involving stakeholders in designing objectives of a research and throughout the research period: 3) facilitating policy maker-researcher engagement in best ways of using research findings to influence policy and practice; 4) active dissemination of research findings to relevant stakeholders and policymakers.

In the South African context, Marais and Matebesi (2012) argues that research is still playing a minimal role in policy development in South Africa, and this is due to "the fact that the goals of policy makers are complex and mostly difficult to test, research is easily labelled as irrelevant, there is seldom consensus in respect of research, there is commonly a range of competing evidence or the existing knowledge is of poor quality" (Marais and Matebesi, 2012: 362). Freiberg and Carson (2010: 156) further acknowledges that although there's an expansion on evidence-based practice but "the relationships between research, knowledge, policy and practice are always likely to remain loose".

2.9.3 EVIDENCE INTEGRATION TO POLICYMAKING

Evidence-based policy making should not be viewed as a mere staged process, rather as one of the determinants that influences the policy outcomes. Freiberg and Carson (2010: 155) dismisses the rational view of evidence integration into policy as a linear process instead recognize that evidence can be ahead of policy making or evidence can be generated while developing the policy and assist to meld it.

Newman (2018: 1109) argues that there is no need to continue convincing policy makers to use evidence by asserting that "If evidence is good for policy—that is, if it is true that more and better evidence, applied correctly, will improve policy outcomes and ultimately improve people's lives—then policy-makers should be the ones to ensure that policy is based on evidence".

Dicks, Hodge, Randall, Scharlemann, Siriwardena, Smith, Smith, and Sutherland (2014) argues that politicians and institutions may claim that their policies are informed by evidence, but it remains unknown how to prove which evidence informed a specific policy. The sources of evidence are always not visible in a policy. There is no existing tool that is used to verify if indeed evidence was used in a specific policy.

Head (2015) locates the debate about the use of evidence within the context of improved effectiveness in service delivery and accountability in democratic countries. Argues that democracies and institutions are adopting the evidence-based approach because they aimed at improving their organizational efficiencies and effectiveness in providing services. This position is also supported by Freiberg and Carson (2010: 161) when asserting that "a reasoned and open dialogic process of policy formulation would not only generate a better model of evidence-based policy but also a greater likelihood of such policies achieving their expressed objectives".

2.9.4 EVIDENCE COLLECTION FOR THE PURPOSE OF POLICY DEVELOPMENT AND DESIGN

Furthermore, it is worth noting that not all evidence is equal, some is more credibly, reliable and valid than others. In this instance, evidence emanating from scientific research seems to be ranked high if compared with other sources of evidence. However, Sutcliffe and Court (2005: iv) stresses that "policy should be informed by a wide breadth of evidence, not just hard research".

There is an assertion that for evidence to be used successfully is dependent on its location in the evidence hierarchy and the amount of evidence is still open for debate (Head, 2015; Davis, 2004; Sutcliffe and Court, 2005; Bouffard and Reid, 2012). Punton, Hagerman, Brown, Echt, Fisher, Lloyd, Morton and Vogel (2016: 20) supports this assumption by arguing that the "quality criteria also often refer to the 'size of the evidence base', underpinned by the assumption that studies can be 'added up' to generate more reliable findings".

On the contrary, Tenbensel (2004:190) warns that it is also crucial to be cautious about the type and amount of evidence because "the relationship between different types of evidence in the policy process is incoherent and potentially conflictual". Tenbensel (2004) concludes by suggesting that the amount of policy-relevant evidence has no bearing in arriving at more

rational and political immune policies by arguing that it doesn't matter the "efforts to gather more policy-relevant evidence, in themselves, are unlikely to lead to policy making that is more rational and less political" (Tenbensel, 2004: 206).

2.9.5 ORGANIZATIONAL CAPACITY AND INDIVIDUAL SKILLS

Other case studies in evidence-based policy raises the argument that studying the process alone without looking at the capacity and skills within the institutions is not enough (Marais and Matebesi, 2012; Young, Gropp, Pintar, Waddell, Marshall, Thomas, McEwen, and Raji, 2014). Young et al. (2014: 587-588) submits that "developing organizational capacity and individual skills are all key components of the successful adoption and establishment of EIPM… enhanced education and training in both research and policy realms will be necessary to facilitate EIPM in this sector"

2.10 THE INTEGRATED THEORETICAL FRAMEWORK: EVIDENCE-BASED POLICY MAKING

Dye (2013: 33-34) describes public policy making as a political process comprising of series of political activities embedded in each of the following stages: Problem identification, agenda setting, formulation, legitimation, implementation, and evaluation. Lesia (2015: 13) confirms that "this entails that policy formulation is the process by which the end result is a policy". This therefore suggests that policy making is generally informed by the series of activities that takes place within the political system.

These stages can be complex and entails greater details in that they involve several theories, they are not easily distinguishable and sometimes two stages can take place at the same time, they are normally accompanied by political interventions/influence. It is therefore worth mentioning that policy processes, as discussed in section 2.4 above, are never as linear, or cyclical, as implied in the models. But, looking at the policy process in terms of these stages or functional elements can help us to understand how this process does work.

Policymakers are increasingly realising and acknowledging the interdependency nature of problems in the policy environment. This requires a consideration of systems approach in addressing problems which implies that policymakers should think "expansively" rather than in isolation of problems. The systems perspective in the context of evidence-based approach

enhances the ability to develop and use evidence effectively. Dunn (2018: 41) asserts that the "systems perspective can forecast the potential consequences of not taking action, possible unintended effects of intervention, the likely magnitude of the effect of one or more interventions, conflicts between or complementarity of interventions, and priorities among interventions".

This study adopted the evidence-based approach to public policy making as illustrated in figure 4 below. This theoretical framework is based on the assumptions that the ideal evidence-based public policy development process should find its foundation on multi-stakeholder involvement and collaboration in a form of continuous exchange of experience, evidence and expertise to guide all stages of the process. It should still consist of the 6 generic conversional policy making stages as discussed in section 2.4 above. However, experience, evidence, decision-making and expertise is crucial.

Figure 4: Adopted theoretical framework
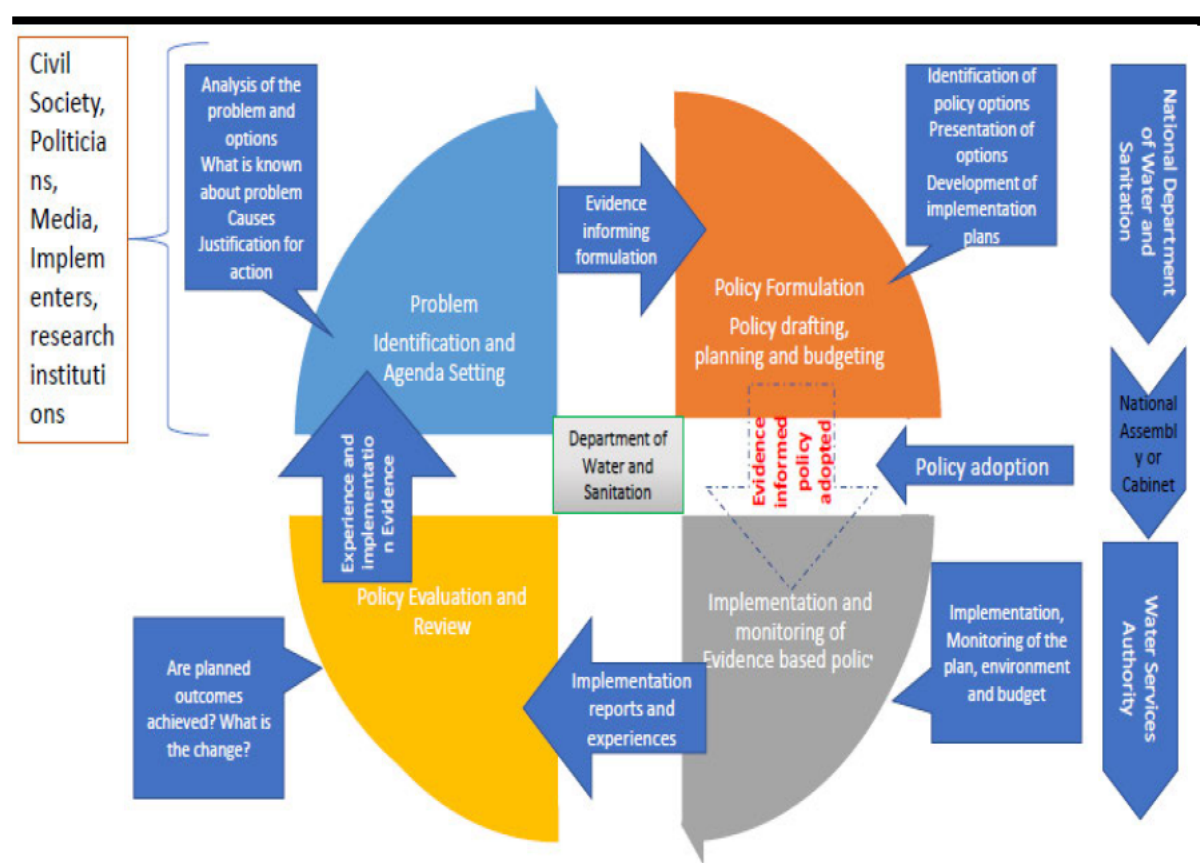
Source: adapted from DPME (2014), Cloete et al. (2006), Banks (2009), Dye (2013), Howlett and Mukherjee (2017), Dunn (2018)

This framework was used to understand policy making process in the Department of Water and Sanitation, what was supposed to be done (based on public policy making theories and models), against what happened (based on actual evidence and step by step process followed by the Department). This model is adapted from the previous conventional policy making models and fused with the existing institutional arrangements in the water and sanitation sector and South African Government processes. And all this will be done within the context of evidence-based public policy making assumptions.

2.11 CHAPTER SUMMARY

This chapter provided a conceptualization and theorization of the public policy making process. This was done by drawing on the work and perspectives of different scholars on how public policy and public policy formulation process has been conceptualized and theorised by different decision-making institutions/bodies and how the concepts are understood in the context of broader public decision-making process. More closely, this was done within the context of evidence-based public policy making process as a new modern phenomenon aimed at improving policy impact and thereby resulting in more efficient and effective public service provision.

The following chapter will provide an overview of service delivery and provision of water and sanitation in South Africa as a result of its policy outputs since the new democratic order. This will be done with the intention to highlights some level of progress and to reflect on what remains a challenge. This will be done with the view to reflect on the policy development process within the Department of Water and Sanitation at the end.

CHAPTER 3: PUBLIC POLICY IN THE CONTEXT OF SOUTH AFRICA

3.1 INTRODUCTION

The previous chapter provided the theoretical framework on public policy and evidence-based public policy making process. The chapter unpacked terms, concepts, theories and debates around public policy process and evidence-based policy making. It also provided a brief reflection on some case studies on evidence-based policy making. It concluded by outlining themes emerging from the literature and case studies on evidence-based policy making. The last section presented an integrated evidence-based policy making theoretical framework that will be guiding the study further.

The purpose of this chapter is to provide the reader with a clear picture of the environment to be navigated during this study on evidence-based policy making in the water and sanitation environment in South Africa. This chapter will commence by proving a brief outline of public policy making in South Africa post 1994. The second part will introduce the South African Government system with the intention of discussing and highlighting the significance of local-national government relations within the water and sanitation policy environment and service delivery. This should shed some light in terms of understanding local government as an institution responsible for provision of water and sanitation services, and the Department of Water and Sanitation as the department responsible for water and sanitation policy formulation.

The third part will provide a brief overview of provision of water and sanitation in South Africa as a result of its policy outputs since the new democratic order. The intention is to highlight and reflect on some level of progress made as a result of policy interventions and what remains a challenge. This will be done with the intention to reflect on the evolution of policy development process within the Department of Water and Sanitation as the department responsible for regulating the provision of water and sanitation services in the country. This will be done by providing the historical context to water access, legislation currently governing the sector, and the current process and procedures in water and sanitation policy design and development. The intention is to examine the existing institutional arrangement and what are the systems and processes in place used by the Department of Water and Sanitation to guide policy development and design.

3.2 PUBLIC POLICY MAKING IN THE SOUTH AFRICAN CONTEXT

In summarising the current public policy making in South Africa, De Coning and Cloete (2006: 30), states that public policy making in the new dispensation (post-1994) has embodied participation and public choice which include direct representation, empowerment and active decision making. Contrary to the conditions that existed pre-1994, the nature of the public policy making process is therefore viewed as transparent, inclusive and consultative. This suggests the complexity in public policy formulation process as it involves not only finding the way of "best and cost effective" method of solving the problem but it includes intense negotiations, resource considerations and ensuring that the diverse goals and objectives are translated into one common intervention.

This description of public policy formulation and its activities occurs under pre-defined socio-political and economic context. Processes, procedures and activities should take place within set principles in a democratic society like South Africa. The Constitution of the Republic of South Africa is the supreme law that provides for the establishment of other processes, frameworks and institutions in the Republic.

3.2.1 The Nature of Public Policy Making in South Africa

Following the dawn of democracy in 1994, the new Constitution (The Constitution of the Republic of South Africa, 1996, Act 108 of 1996) has created new processes, structures, institutions and procedures that serve as mechanisms for public policy formulation in the new constitutional democracy. The new constitutional order allowed for the establishment of institutions such as the Legislature, the Executive and the Judiciary which are three arms of the State.

Matshikwe (2004: 184) suggests that, in the South African context "public policy is the product of the social, economic, political, cultural, technological, and natural conditions of a given society in a particular epoch or period in the historical development of that particular nation or society and is influenced by dominant national and international forces and these influences may be cultural, economically, socially, politically, technological, and type and system of government". This suggestion found basis on the assertions by Parsons (1995:207), who argues that public policy-making takes place in the context of the constraints of economic, social, geographical, historical, cultural and globalisation limits, and that public policy-makers engage in judgements as to what these realities are.

These constraints are more visible and evident in the South African context given the historical injustices that translates into the other constraints. Therefore, the role of these institutions becomes even more crucial in considering these constraints during policy decision making process. Such consideration finds expression in the South African slogan that is aimed at social cohesion which is "united in diversity". Matshikwe (2004: 13) argues that "policy-making also takes place within the parameters of past policies and choices, as well as inherited institutional arrangements. When issues arise, or when problems are formed and policy options set out, this happens in a setting that compromises the policies, programmes and decisions of the past. The past policies will have a significant influence on how current issues will be defined and what strategies and means and ends will be deployed. The importance of historical constrains is well illustrated by the South African situation". This aspect will be demonstrated when discussing historical context of water and sanitation public policy making later in this chapter.

The second aspect is the broader South African government configuration, in relation to its powers and functions as provided for in the Constitution and within the context of cooperative governance. The Constitution, as the supreme law of the Republic, further affirms that the Republic of South Africa is one, sovereign, democratic state founded on the values of, human dignity, the achievement of equality, and the advancement of human rights and freedoms; Non racialism and non-sexism; Supremacy of the Constitution and the rule of law; and Universal adult suffrage, a national common voter's roll, regular elections, and a multi-party system of democratic government, to ensure accountability, responsiveness and openness. These values are fostered through several institutions that are also established in terms of the same Constitution.

This means that, South Africa, as a sovereign and constitutional democratic state, founded on the principles of democracy, should be abided by all associated values including public and stakeholder participation in decision making process. Given the governmental configuration in South Africa, public participation can either be direct or indirect (Direct means participating in the actual elections of national or provincial political party representatives. Indirect means entrusting elected representatives and structures to represent the interest of the community).

Notwithstanding the above narrative, the Constitution provides that public policy making in South Africa takes place at various government levels, i.e. National, Provincial and Local government levels.

Additionally, Matshikwe (2004) introduces what he refers to as three policy levels in South African policy making system. He refers to the first level as political policy level. This is more largely related to the political party manifesto. Based on societal challenges, the political party, going to elections, formulate what is known as "solutions to the problem". This approach implies that should the party win elections, this forms part of agenda setting, and provides overall framework for the technocrats to formulate policies. The role of political office bearers in this case becomes that of providing oversight and ensuring that such policies are implemented. These are approved at the legislature level. They are tabled by the majority ruling party and in most cases approved through the parliamentary majority vote.

Executive administrative policy becomes the second level. This relates to the policies that gives effect to the political policies. In the South African context, these policies are approved at the Cabinet level. And the last level is operational policy. These are the ones that provides internal step by step guidance to officials or technocrats on what needs to be done. This level of policymaking usually relates to routine work that can be performed by supervisors at the lower level of the hierarchy.

Dye (2013: 3) provides a simplified academic definition of public policy as, "whatever governments choose to do or not to do". This simple and accurate definition does not provide for any process of procedural steps that are prescribed for government to follow. Many scholars explored in the literature places the responsibility of policy making as a central function of government hence the policy output and quality of those policies is highly dependent on the capacity of government to curry out this function. Policy making process is part of the whole policy management function (Lesia, 2015: 92).

Booysen (2006, cited in Venter and Landsberg, 2006: 165-166) provides a theoretical and conceptual analysis of public policy making in South Africa. This analysis commences by acknowledging the two different types of public policies, i.e. distributive and regulatory policies. She further argues that the theories and models of the policy process in South Africa should be understood in both process phases paradigm and stream approach.

One of the views espoused in the literature is that "In most African countries, policy-making has been encompassed with several problems and the institutional environment in which policy

formulation happens is at the fore front of them all" (Lesia, 2015: 92). The institutional environment within which policymaking takes place cannot be overlooked or underestimated because it is through the institutional environment that the policymakers should respond, and it also serves as a source of demands. The institutional environment for policymaking in Africa portrays various instances of policy failures in a number of countries, including South Africa (Lesia, 2015: 92).

Most African countries are characterised by a regime whereby policymaking is viewed as an activity of elites and it is also considered an art of secrecy reserved primarily for a few trusted citizens but kept away from the general public (Lesia, 2015: 93). Party politics are significant in Africa and they impact on policy decision-making in a negative manner on various occasions. The findings of the research on decision making in street naming changes process in South Africa, revealed that party politics influenced public participation and decision-making processes. In other instances, the decisions made on behalf of communities were merely meant to serve party politics interests (Xaba, 2009: 87).

The study concluded that most of the names that were introduced had minimal significance or not attachment to the local communities. They only had political interpretation for the governing party. It further exposed flaws in the process of stakeholder and public participation. It raised questions about the accurateness of party and proportional representation, as to whether the community representatives are genuinely representing community needs or the needs of their political parties. Who are the community representatives accountable to, their political party or communities or both?

Booysen (2006:172) understood public participation in South Africa as "the direct involvement of citizens in seeking information about and making-decisions related to certain specified public issues." Public participation in public policy making in South Africa has been one of the founding principles post 1994. Pre-1994, policy making process within the South African government was exclusive of the citizens who are directly affected by such policies once crafted by the political elites.

Lesia (2015: 95-96) accurately summarises key factors which impact negatively on the public policy making process in Africa, including South Africa, as: "The first one is the issue of the environment in which policies are formulated. In most cases, public policy makers fail to

understand their policy environment and the kinds of problems they generate. This is evident because there is also an artificial line which normally exists between policy makers and other stakeholders during the process. Policy makers constitute the elitist group with their own experiences of policy problems which often differ from the perception of other stakeholders who represent the majority group. In this situation, policy formulation is always informed by their backgrounds which are not grounded with a holistic or in-depth understanding of what policy formulation entails.

The second one is the issue of decision making over policy choices which is not based on adequate information coming from the single-actor. It is often that information is always generated and gathered only from the bureaucrats for policy making and ignoring information which might be useful from other stakeholders. The experts from research institutions have no room in policy making and their findings which can impact on policy making process are marginalized by the elites. This happens even in cases where research projects have been sanctioned or commissioned by the very same elites. They keep recommendations in the shelves and do not bother to implement them.

The third one is the issue of scarcity of resources whereby African countries have poor economies which result in the inability of most countries to mobilize resources. There is also mismanagement of the few that are there which are not used effectively for policy making purposes. The other problem with resources is that resources are always channelled to short-term problems which are of priority in African states. These short-term problems can be socio-economic problems, nation building activities and disasters which are at the top agenda of different countries. It is against these institutional incapacities that public policymaking in Africa is confronted with and these lead most countries to be stuck in the undeveloped stage because of poor policies that are being made by the governments". In this context, South Africa is also not immune to these challenges.

3.3 SOUTH AFRICAN GOVERNMENT SYSTEM AND CONFIGURATION

South Africa is a constitutional democracy with a three-tiered system of government (national, provincial and local) that functions in an 'interdependent and interrelated' fashion. Local government (municipalities), as the lowest tier, have the right to govern the affairs of local communities' subject to provincial and national legislation. Schedule 4 and 5 of the

Constitution stipulates the concurrent responsibility or accountability between national and provincial government and exclusive provincial government functions, respectively.

Section 40, sub-section 1 of the Constitution of the Republic of South Africa stipulates that government is constituted as national, provincial and local spheres of government which are distinctive, interdependent and interrelated. The three spheres of government and organs of state in each sphere are constitutionally bound by the principles co-operative governance. The system of government in South Africa is thus a co-operative government system in which the constitution recognizes the various spheres of government within an interrelated and interdependent framework, each playing an integral part in the execution of coherent government for the country. In playing that role, each sphere is "distinctive, interrelated and interdependent".

The Constitution of the Republic of South Africa, 1996, Act 108 of 1996, as amended, further confer specific functions as competency of local government which is regulated by either provincial or national government. National and provincial government is therefore required, to play the regulatory and supporting role to local government which amongst others include: to develop policies, strategies, norms and standards to guide local government in delivering crucial and much needed services to communities. Although local government is in a forefront or frontline of service delivery value chain, it is equally important to understand what the legislation provides in terms of the interdependency of local government and other spheres of government; to provide a general overview of the current state of basic service delivery (services that falls within the local government competency); and, understand the current or ideal engagement patterns between local and national government with regards to policy development.

3.3.1 National-Local Government and Cooperative Governance

Although the three spheres of government in South Africa are deemed to be autonomous from each other but they are also interdependent and interrelated to each other and are expected to abide by the principle of cooperative governance. This principle is based on the premises that all spheres of government are there to service the citizens as one and work collaboratively in various programmes and policies to achieve a common objective, i.e. development and service delivery. There are two aspects in which the Constitution of the Republic of South Africa

requires the various government institutions and departments to work collaboratively to achieve a common objective.

The first aspect is through the cooperative governance which requires all spheres of government and state organs to inform and consult one another on matters of common interests. This must be done through the second aspect, which is Intergovernmental relations. Govender (2015: 77) defines that role of intergovernmental relations as "to provide a supportive and collaborative environment to govern within a democracy focusing on the effective and efficient use of resources to improve the socio-economic status of citizens. Strong coordination and cooperation among the three spheres of government is needed for the effective Integrated Development Plan (IDP) implementation; financial planning for common interventions; and the collaborative management of service delivery. For the municipalities to develop a realistic service delivery plans, both the national and provincial governments need to be involved in the development of these plans".

The White Paper on Local Government defines Intergovernmental Relations as "the formal and informal process, institutional structures and networks for regular communication within and between the three spheres of government for joint policy, programme and project interventions" (Govender, 2015: 78). Such process, institutional structures and networks can be either vertical or horizontal, or even both.

The Constitution of the Republic of South Africa stipulates the need for the principle of cooperative governance and intergovernmental relations being established at all spheres of government. This principle should consist of, inter alia, 'assisting and supporting one another; informing and consulting one another on matters of common interest; coordinating their action and legislation and adhering to agreed procedures' (Govender, 2015: 79).

In giving effect to such constitutional provision, section 41 of the Constitution "allows for an [A]ct of parliament to formulate and develop structures to promote intergovernmental relations" (Govender, 2015: 79). Based on the principles of cooperative governance and intergovernmental relations, the Intergovernmental Fiscal Relations Act of 1997 and Intergovernmental Relations Framework Act of 2005 are amongst the key legislative frameworks that guides and regulates different aspects of Intergovernmental Relations. The Intergovernmental Fiscal Relations Act of 1997 and Intergovernmental Relations Framework

Act of 2005 regulates, specifically, the fiscal, budgetary and financial matters; and mechanisms and procedures for structures and dispute resolutions, respectively.

At its most basic level, therefore, the co-operative governance system and Intergovernmental Relations (IGR) are about relations between national, province and local government and how these spheres of government can be made to work together for the benefit of the country. Intergovernmental relations have been conceptualized as processes through which political priorities are harmonized to flow in the same developmental direction. Ultimately, IGR is the system that incorporates all collaborative approaches and that underpins the constitutional principle of co-operative government.

According to Powell (2001: cited in South African Local Government Association, 2014), IGR can be viewed as the institutional machinery the structures, processes and mechanisms that give institutional form to the interaction and co-ordination required of the sphere of government when they exercise their powers and function. More importantly, however, the significance of IGR, as the axle that connects the state machinery, is based on the realization that the achievement of shared growth and integrated sustainable development requires collaboration and partnership between various actors, particularly between the sphere of government and its departments. This is especially challenging in the light of the varied role player by the different sphere and of the resources they have to invest in the same physical space, necessitating inter- and intra-governmental collaboration around a common developmental vision. Unless an integrated and coherent approach to addressing the challenge of governance is taken, the spheres and departments of government will continue to plan and implement policies and programmes in isolation from one another.

From the perspective of residents and investors, there is only "government". IGR structures therefore play a crucial role in forging coherent government for the country in that they establish platforms for engagement to take place between national policy direction for the country and the distinctive service preferences of provincial and local government. Communities are not interested in which sphere of government or which department is responsible for providing housing, sanitation or health care and become frustrated when municipalities appear to pass accountability to other provincial or national departments.

The primary object of co-operative government is not co-operation for its own sake, but to provide effective and efficient government. The practice of co-operative government is the marshalling of the distinctive efforts, capacity, leadership and resources of each sphere and directing these as effectively as possible towards the developmental and service delivery objectives of government as a whole. Although different scholars define local government differently but similar in a sense that all definitions agree on certain aspects, inter alia, it is defined within a democratic state, it promotes and strengthen democracy and public participation, it is the lowest sphere of government which is in contact with its populace on a day-to-day basis. Reddy (1999) defines local government as "the level of government created to bring government to the local populace and to give citizens a sense of participation in the political processes that influence their lives.

In addition, Van Der Waldt (2007) further expands by saying "local government is an institution that the central government has established by law for the residents of a particular area. It has a power to exercise legislative and executive authority, and it is an autonomous body within the limits of the constitution of a country, as well as national legislation. It also has the power and functions to provide services and amenities to residents in its municipal area and to promote and maintain their well-being". They are entrusted with a responsibility of converting national strategic frameworks into actual services that are provided to its communities, national plans and programmes to implementable actions.

The authors Reddy (1999); Van Der Waldt (2007); Reddy and De Vries (2015) are in consensus with the fact that local government is defined by six distinct elements, i.e. locality, legality, autonomy, performs governmental powers and functions, promote participation and representativity. In the South African context, where there are three spheres of government which are established in terms of the Constitution, i.e. National, Provincial and Local government, it is the level where the institutions known as 'municipalities' are located.

Municipalities are defined as institutions at the local government level which consists of both politically elected representatives as well as officials/technocrats which serves the administration arm of the institution. The Local Government: Municipal Systems Act (Act 32 of 2000: 12) defines the municipality as an organ of state within the local government sphere of government exercising legislative and executive authority within an area determined in terms of the Local Government: Municipal Demarcation Act, 1998…consisting of political

structures, office bearers and administration; a geographic municipal area and the community of the municipality.

Chapter 7 of the Constitution (Constitution of the Republic of South Africa, 1996, Act 108 of 1996) divides the local sphere of government into three categories, namely metropolitan (Category A), district (Category C) and local municipalities (Category B). Metropolitan municipalities are located in large, densely populated areas, with strong, complex and diverse economies, and municipalities have exclusive municipal executive and legislative authority in their respective areas. By contrast, district municipalities are predominantly located in much poorer, sparsely populated rural areas. The district municipalities are tasked with the responsibility to coordinate with other spheres of government and with planning and resource allocation across their constituent local municipalities. Local municipalities (Category B) share municipal executive and legislative authority in its area with the Category C municipality within whose area it falls.

The new South Africa Constitution supported devolution of certain responsibilities to local government by mandating local government *as 'a sphere of government which had the right to govern, on its own initiative, the local government affairs of its community, subject to national and provincial legislation, as provided for in the constitution*' (Constitution of the Republic of South Africa 1996: section 151). Section 152 of the Constitution of the Republic of South Africa (Act 108 of 1996) sets out the objects of Local Government as: the provision of a democratic and accountable government for local communities; ensuring the provision of services to communities in a sustainable manner; the promotion of social and economic development; the promotion of safe and healthy environment; and, encouraging the involvement of communities and community organizations in matters of local government.

South Africa has eight metropolitan municipalities, 44 district municipalities, and 226 local municipalities (South African Government, 2017). All these types of municipalities have a core responsibility for, amongst others, provision of water, sanitation, markets, refuse removal, and land management. It should be noted that, provision of water and sanitation can only be performed by certain municipalities that are classified as Water Services Authorities (WSA). The Department of Cooperative Governance has powers to allocate WSA status to municipalities that qualifies in terms of the criteria and capacity to perform this function.

Section 4B of the Constitution mandated water and sanitation services (limited to potable water supply systems and domestic wastewater and sewage disposal systems) as a local government function. The Constitutional responsibility of local government was thus to provide water supply and sanitation services to all individuals in their jurisdiction, with this responsibility legitimised in the Water Services Act (No. 108 of 1997) (South Africa, 1997). The Act introduced the concept of Water Services Authorities (WSAs) which were assigned the responsibility to progressively ensure efficient, affordable, economical and sustainable access to water services (referring to both water supply and sanitation).

3.3.2 Legislative Mandate of Developmental Local Government

The Constitution of the Republic of South Africa of 1996 provides an overall legislative framework in which local governance structure can be established with its distinct powers and functions of building local democracy, promoting socio-economic development and provision of basic services. The White Paper on Local Government of 1998 gives effect to such provision of the Constitution. It provides paradigm shift in terms of radical reorientation of local governance and in promoting representative and participatory planning as well as integrating community participation in planning and development.

David and Maphunye (2009, cited in Reddy and De Vries, 2015: 60) mentions there are a number of legislative frameworks that provided guidelines and mechanisms for the establishment of "municipal type and their governance structure; pronouncement of powers and functions of local government; the definition of boundaries through the demarcation process; restructuring local government systems, processes and procedures" (Reddy and De Vries, 2015: 60). The Local Government: Demarcations Act of 1998 as amended by Local Government Laws Amendment Act 51 of 2002, the Local Government: Municipal Structures Act of 1998, the Local Government: Municipal Systems Act of 2000, and the Local Government: Municipal Finance Management Act of 2003, are amongst the most fundamental legislations that laid a foundation for the establishment of progressive, democratic and effective local government in South Africa.

The Local Government: Municipal Demarcation Act of 1998 provides for the establishment and definition of new inclusive municipal and ward boundaries. This process is undertaken by the Municipal Demarcation Board as established in terms on the same Act. Once the boundaries

are defined and confirmed by the Board (1998: 3), the matters relating to the internal systems and structures as well as electoral systems is regulated through the Local Government: Municipal Structures Act of 1998. It further provides for the categorization (local, district and metropolitan) of different municipalities and defines functions and powers of the various categories.

In addition, the Local Government: Municipal Systems Act of 2000 provides internal systems and processes on administrative matters of the municipalities. It gives guidance on the manner and nature of how services, and which services must be provided to local communities. Gives effect to the intergovernmental relations framework and promote cooperative governance and intergovernmental relations with other spheres of government. Outlines the areas of concurrence with other spheres and procedures on dealing with those matters of concurrence functions.

The Local Government: Municipal Finance Management Act of 2003 is aimed at ensuring a sound and sustainable financial and fiscal management, budgeting and use at the municipal level by establishing relevant norms and standards regulating budgeting, accounting, procurement, auditing and reporting in line with best practices.

In all these legislations, it is clear that none of them outlines the role and obligation of local government towards both provincial and national government in terms of being part of and influencing decision-making at those two spheres. In terms of the intergovernmental relations frameworks, local government is linked with the two spheres in terms of it implementing the policies and programmes emanating from the same as well as reporting and accounting to them in terms of progress made.

3.4 POLICY, GOVERNMENT INSTITUTIONS AND SERVICE DELIVERY

Post-Apartheid South Africa inherited a segregated service delivery method where black, predominantly in rural areas, were provided with least services of lesser quality compared to their counterparts in urban areas. The first task was to foster the state where services can be provided in an inclusive and equitable manner for all. This meant huge institutional transformation and reform which includes; "to set a process in motion to move away from the racially based local government [in particular] and to address inequalities, structural, financial and other problems" (Reddy and Maharaj, 2008: 191). Since 1994, South Africa's democratic

governments have extended basic service provision to poorer areas of many cities, towns, and rural areas to reach the poorest of the poor. For the first time, many citizens enjoyed electricity, clean potable water and sewage systems that had previously been reserved for whites-only suburbs.

In the recent years, the growing frustration over poor service delivery has been evident through the public protests that has marked the second decade of South Africa's democratic society. This is the indication that citizens want to see tangible results and real improvements in their lives and no longer convinced by the political rhetoric and populism. In view of this, Mdlongwa (2014:1) assert that "in the 20 years of democracy one has seen some strides made in certain key sectors of the economy like education and health, however, at a local government level the quality and efficient delivery of basic services to people like water, sanitation, housing and electricity remains a huge challenge". This has been evident in the increase of violent service delivery protests across the country with people frustrated at the slow pace of delivery and also at corrupt practices that have become rife in some municipalities.

It is important to look at some of the challenges within local government in order to understand how they hamper service delivery. It is important to note that education and health is predominantly a national and provincial government competency. In summing up the challenges, Mdlongwa (2014: 1) outlines them as: Human resource challenges with regards to skills and capacity in municipalities; Corruption and maladministration; Financial challenges; Lack of awareness and lack of knowledge by communities with regards to their rights; and Slow rollout of services. Owusu-Ampomah and Hemson (2004, cited in Nkomo, 2017) argues that "service delivery in South Africa is seen as an instrument and social contract to create social inclusion and raise living standards of the poor majority previously excluded by the apartheid government". Similarly, Matebesi (2017) argues that in relation to the ongoing violent service protests, there is an urgent pressing need to consider their impact to future generations.

While the service provision functions are for the most part shared between the three spheres of government, National and Provincial governments are exclusively concurrently responsible for social services such as health, education and social welfare. All three spheres are jointly responsible for function such as the provision of water, electricity, sanitation and environmental health. However national government's role is confined primarily to regulatory,

that of setting policy, strategy, regulations, norms and standards to ensure equitable service provision throughout the budget process, monitoring impact, providing information and support and exercising oversight.

Provinces and municipalities, on the other hand, deliver these services to the public within the framework of national policy. They are vested with the authority to determine their own budget, to decide the appropriate mix of services for their regional or local area, to decide the public, and to account for performance. Both spheres receive transfers from the national fiscus to fund basic service provision in the form of an unconditional equitable share of revenue and grant funding conditional to a specific purpose; but municipalities also raise substantial revenue of their own through rates on property and user charges for that reason receive a substantially smaller percentage of funding through transfers than province do.

The World Bank *Accountability in Public Services in South Africa report* (2011: xv) stipulates that the *"discrepancy between inputs and service outputs and outcomes could be explained partly by the evolution of South Africa's system for intergovernmental relations, which has resulted in systemic policy and program challenges for services, particularly for municipalities".* Although this was highlighted as a challenge by the World Bank's report, Statistics South Africa indicates that "Tremendous progress has been made over the past few decades in the delivery of basic services. The Community Survey 2016 found that 89,8% of households used piped water, that 63,4% used flush toilets connected to either the public sewerage or to a local septic system, that 63,9% of households receive refuse removal services, and finally, that 87,6% of households had access to electricity" (Statistics South Africa, 2016: xiii).

Municipalities, as defined in the preceding section of this chapter, are the most basic units of government in the country and are tasked with providing basic services and fostering development within their boundary. Basic services are the fundamental building blocks of improved quality of life, and adequate supplies of safe water and adequate sanitation are necessary for life, well-being and human dignity. In the same breath, it is acknowledged that the extent of service provision varies from region to region and also depending on the category and settlement type in that municipality.

According to Community Survey 2016 data (Statistics South Africa, 2016: xiii) "Households living in rural municipalities usually have access to far less, and usually also more inferior services to those living in wealthier, particularly more urban municipalities. Although the reasons for the existence of backlogs differ by service and between municipalities, part of the reason relate to the legacy of unequal development which still haunt former homeland areas, high levels of poverty that limit households' ability to pay for services, as well as the practical constraints of extending services to far off rural areas or densely populated informal areas at great expense to the local municipality. Based on this context, further unpacking the functions of each government sphere becomes prudent in order to understand how they are interrelated (within the context of intergovernmental relations), and how they complement and support each other in achieving one common goal, which is to improve the lives of all citizens".

Fast forward to 2017, Statistics South Africa's General Household Survey indicates that "Although generally households' access to water is improving, 3,7% of households still had to fetch water from rivers, streams, stagnant water pools and dams, wells and springs in 2017…20,5 percent of households in South Africa have access to improved sanitation since 2012" (Statistics South Africa, 2017: 4). These achievements can be attributed to the full understanding and appreciation of policy objectives of the services that need to be provided. In this case, the abovementioned figures can reflect better understanding or lack of understanding of policy objectives practicality to derive desired service delivery outcomes by local government hence the rule of engagements in decision making becomes crucial e.g. public policy decision making.

3.5 POLICY PRINCIPLES ON PROVISION OF WATER AND SANITATION

The White Paper on National Water Policy for South Africa (1997) provided several key principles (policy intents) which needed to be considered in the development of the new water and sanitation legislation in the country. Amongst those principles are: water is a common good held in public trust; universal access for all citizens is a basic right; and ensuring equitable access.

In 2001, South Africa experienced a shift in the management structure of water services in the country. Prior to 2001, regulation, management and implementation of water services (collectively referring to water supply and sanitation) was the responsibility of national government, chiefly the Department of Water and Sanitation (then called Department of Water

Affairs and Forestry). In 2001, responsibility for provision of water services devolved to the local government, as per Constitutional requirements. The regulation and monitoring responsibility remained with national government.

At the time of developing the new (post 1994) water and sanitation policies for South Africa, the then legal understanding of water use was based on a link between the right to use water and the ownership of land adjacent to that water (the riparian law principle). The system of riparian rights (as found in the water legislation of the time, the Water Act (54 of 1956)) was largely developed by the courts through a combination of Roman- Dutch, English and American law (Department of Water Affairs and Forestry, 1997: 22). This resulted in the idea that all adjacent landowners could take their share of water from a river (Department of Water Affairs and Forestry, 1997: 22).

The 1956 Water Act did not explicitly determine who the owner of private water was but confirmed the exclusive use rights of the water by the owner of the land where the water had its source or flowed over. The 1956 Act, based on riparian rights, thus privileged White riparian landowners in accessing water resources while excluding the majority of South Africans from access to water rights.

Prior to the new 1998 National Water Act, water users who did not have access to water as a result of land ownership or did not have property adjacent to a river, could only gain access to water through a Water Court application (with the limitation that they meet their needs without affecting the allocations of riparian owners), or by buying land with access to water (Department of Water Affairs and Forestry, 1997: 22).

Thus, prior to 1998, access to water remained heavily skewed in favour of a privileged minority of private landowners in the country. There was a need in the new policy to develop a means of balance growing demands on available resource, to strengthen the role of Government as the guardian of the public interest (Principle 12) and ensure equity in the sector as a whole (Department of Water Affairs and Forestry, 1997: 22). One of the most important challenges for post-apartheid democratic water policy in South Africa was to address these challenges, as well as find a balance between traditional views that water is a public good and the modern view that water also had a commercial value.

The Bill of Rights of the Constitution of South Africa, 1996 (Chapter 2) ensured the rights of individuals to the environment and water. Section 24 of the Constitution provides that "Everyone has the right (a) to an environment that is not harmful to their health or wellbeing; and (b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that (i) prevent pollution and ecological degradation; (ii) promote conservation; (iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development". These provisions place the duty to government (through the department responsible for water and sanitation) to ensure that the new water and sanitation policies ensured prevention of water pollution, that there was sufficient water to maintain the ecological integrity of available water resources, and that water conservation and sustainable "justifiable economic and social development" were promoted (Department of Water Affairs and Forestry, 1997: 11).

The Bill of Rights (Chapter 2) also provided that every person had a right to life and guaranteed the "inherent dignity" of all persons and the "right to have their dignity respected and protected". The state had to make sure that this right was respected, amongst other things, through access to water (Department of Water Affairs and Forestry, 1997: 11). Access to sufficient affordable clean water for hygiene purposes was seen as part of the primary health care services (Department of Water Affairs and Forestry, 1997: 12).

Section 27 of the Bill of Rights provides for the right to water as follows: 1) Everyone has the right to have access to (a) healthcare services… (b) Sufficient food and water; … 2) The state must take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of each of these rights (Constitution of South Africa, 1996: 11-13). At the time of development of the new water and sanitation policies of South Africa the new development vision of the country was the Reconstruction and Development Programme (RDP). The RDP formed the basis for overhauling the legal system and building new laws, including water laws, for its people. The lack of water supply and sanitation services at the time was seen as a key symptom of poverty and underdevelopment (Department of Water Affairs and Forestry, 1994: 4). The provision of such services was deemed to be necessary for a successful development strategy in the country. Hence, the RDP introduced a minimum water supply volume to the country, indicating that the plan was to supply 20 to 30 litres of clean water each day to every person within two years, and 50 to 60 litres a day within five years

from a point no more than 200 metres from their dwelling. Similarly, the RDP indicated that all homes must have sanitation and refuse collection within two years.

3.5.1 International Commitments and Obligations

The White Paper on National Water Policy for South Africa (1997) highlights the need for the South African government to be empowered to give priority to meeting the legitimate water requirements of neighbouring countries (Department of Water Affairs and Forestry, 1997: 4). In a series of international meetings post 1994, South African representatives urged other countries to use water and the water policy as a focus for healing and co-operation rather than as a source of conflict and tension (Department of Water Affairs and Forestry, 1997: 18). As a result of these engagements, South Africa became a signatory to several international protocols which are important for water management policy, such as the Ramsar Convention on the Protection of Wetlands, the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), and the Convention to Combat Desertification (Department of Water Affairs and Forestry, 1997:18).

Similarly, the policy considers international custom and practice (such as the Helsinki Rules) and the need to assist to develop regional co-operation through a variety of Southern African Development Community (SADC) initiatives, including the SADC Protocol on Shared Water Course Systems (Department of Water Affairs and Forestry, 1997:18). These and other international water obligations and agreements continues to inform the development of water and sanitation policies of the country.

In August 2001, the United Nations Secretariat published the 8 *Millennium Development Goals* (MDGs). The MDGs served as a global framework for collective action to reduce poverty and improve the lives of poor people, including income poverty, hunger, disease, lack of adequate shelter, and exclusion-while promoting gender equality, education, and environmental sustainability (World Health Organisation, 2008). A key strength of the MDG framework was that it provided a clear and far-reaching agenda that established consistent practices and standards for international development cooperation (World Health Organisation, 2008). The MDGs included 21-time bound targets across the 8-goal (World Health Organisation, 2008). Although the MDGs comprised of 8 goals and 21 targets, for purposes of this study, focus will be on goal 7 which includes water and sanitation targets. Of note to the water supply and sanitation sector was goal 7, target 7.C.

3.5.1.1 Global Commitments for Water Service Delivery: From MDGs to SDGs

The Millennium Development Goals, which were originally targeted for 2015, have been reviewed and updated to address the current challenges in the global development sector. This review produced results in the Post-2015 Sustainable Development Goals (UNICEF, 2014). The SDGs build on the MDGs, the global agenda that was pursued from 2000 to 2015, and they will be guiding sustainable development until year 2030 (United Cities and Local Governments, undated).

In order for SDGs to be successful, there is a need to shift focus and pay more attention to local government as the level where the majority of implementation and monitoring of targets will occur. The Local Governments for sustainability (ICLEI) state that "Local government authorities and communities need to be empowered accordingly. This means establishing a collaborative balance between local governments, states, and national governments, as well as involving and maximising the contributions from stakeholders and all levels of administration within cities and regions - as well as the communities they serve" (ICLEI, 2015: 2-3).

In addition to this, the United Cities and Local Governments further argues that, there is a need to change the way we view local government as mere implementers of the agenda rather as "policymakers, catalyst of change and the level of government best-placed to link the global goals with local communities" (UCLG, undated). This view is further supported by the Global Taskforce of Local and Regional Governments by stating that "the achievement of the SDGs depends, more than ever, on the ability of local and regional governments to promote integrated, inclusive and sustainable territorial development" (United Nations Habitat, 2016: 7).

The world is moving into a new phase of sustainable development and measures of this development. Out of the adopted 17 Sustainable Development Goals, goal number 6 deals with "ensuring availability and sustainable management of water and sanitation for all". Unlike the MDGs where water and sanitation were part of goal 7 which deals with environmental sustainability, SDGs escalate water and sanitation as an independent goal.

The future water services-related SDG and targets moved from simple measure of an individual having, or not having, access to water and sanitation, to the sustainability of this access. As discussed earlier on in this section that the successful implementation of SDGs is highly

dependent largely on local governments working in collaboration with other institutions and sectors of society. This even more relevant and appropriate in South African context as the legislation entrusts the responsibility of ensuring access to clean water and sanitation to local governments. It is for this reason that it is important to understand the state of readiness of local government to implement them.

Since the adoption of SDGs, there has been an appetite from different commentators, writers and international institution to unpack the process for their implementation. This process has since been referred to as localization of SDGs. This is viewed as a point of departure for national, regions, sub-regions and local government institutions. Localization means "the process of considering subnational contexts in the achievement of the 2030 Agenda, from the setting of goals and targets, to determining the means of implementation and using indicators to measure and monitor progress. Localization relates both to how local and regional governments can support the achievement of the SDGs through action from the bottom up and to how the SDGs can provide a framework for local development policy" (United Nations Habitat, 2016:6).

The SDG 6 Synthesis Report on Water and Sanitation1 produced by UN-Water presents a review of the latest SDG 6 indicator data. This report has produced a baseline from which to measure future progress and has identified gaps in knowledge, capacity and resource availability. The baseline data illustrates that at current progress SDG 6 is not on track to be achieved by 2030. For instance, achieving access to safe and affordable drinking water will mean providing basic water services to 844 million people and improving service quality to 2.1 billion people who lack safely managed drinking water services. This will require substantial increases in investment from governments and other sources and strengthening institutional arrangements for managing and regulating drinking water services in many countries.

In terms of access to sanitation and hygiene and end open defecation, the Synthesis report indicates that "over 2.3 billion people lack basic sanitation services, 892 million still practice open defecation and 4.5 billion people lack safely managed sanitation services. These will not be eradicated by 2030 with current trends".

3.5.2 Policies and Legislations Administered by the Department of Water and Sanitation

The South African water and sanitation policies were developed within a legal, institutional and international landscape, all of which are factors in determining the success of implementation of the policies. This landscape provides a background to the environment at the time of development of the policies. Provision of water and sanitation is guided mainly by six policies under the custodianship of the department of water and sanitation, namely: White Paper on Water Supply and Sanitation (1994), White Paper on a Water Policy for South Africa (1997), White Paper on Basic Household Sanitation (2001), Strategic Framework for Water Services (2003), National Water Policy Review (2013), and National Sanitation Policy (2015).

3.5.2.1 White Paper on Water Supply and Sanitation (1994)

The first water-related policy in the country, the 1994 White Paper on Water Supply and Sanitation, focused on the policy intents to build a single, national department to manage and regulate water supply and sanitation in the country. The policy focused largely on the formation of Department of Water Affairs and Forestry (DWAF) and supporting organisations. At the time, local government responsibility for water supply and sanitation had not yet been operationalised, with DWAF envisaged to fulfil this role until this devolution occurred.

The early policy thus assigned national government responsibility to form the new DWAF, particularly the Chief Directorate of Community Water Supply and Sanitation (CWSS) in the DWAF. The purpose of the CWSS in DWAF was the (Department of Water Affairs and Forestry, 1994: 2):

- Ongoing operation of potable water supply systems for which DWAF was responsible;
- Planning of expansion of services (with provincial government) in keeping with policies in the White Paper;
- Promotion of investments to achieve expansion of services;
- Developing of the organisations needed (local and regional) to achieve the goals of the government, as outlined in the RDP; and
- Monitoring and regulation water supply and sanitation activities.

The location of existing regional offices of the DWAF is catchment based in accordance with the requirements of their water resource management functions. The scope of these activities

suggests that new, specialised regional offices will be required to undertake this role. These will be located where appropriate, usually in the provincial capitals to accommodate the need for liaison with provincial governments on issues of planning and operation.

The water supply and sanitation offices will be the executive arm of the Department except where Water Boards are established. When this occurs, the regional offices will continue to play a role in the planning of new services, the allocation of central Government funds and the monitoring and regulation of service provision (Department of Water Affairs and Forestry, 1994: 24).

3.5.2.2 White Paper on a National Water Policy for South Africa (1997)

Management of water in South Africa is constitutionally a national function, and the role of public trustee of our water resources is ultimately a duty imposed on national Government (Department of Water Affairs and Forestry, 1997: 12). This water policy thus assigns government custodianship of the water resources of the country. The policy intent related to this custodianship includes that National Government ensures the development, apportionment, management and use of water resources is carried out using the criteria of public interest, sustainability, equity and efficiency of use in a manner which reflects its public trust obligations and the value of water to society while ensuring that basic domestic needs, the requirements of the environment and international obligations are met (Department of Water Affairs and Forestry, 1997: 61).

It is also the duty of the national and provincial governments to ensure that municipalities are effectively performing their functions, including the provision of water supply and sanitation services, and to assist them to achieve this goal (Department of Water Affairs and Forestry, 1997:12).

The policy recognises that national Government will need to be developmental in its approach to water management, as it will need to carry out its *integrated water resource management* functions and at the same time *build organisational capacity* to fulfil this role. Policy intents on the water resource management functions include resource allocation and protection, use and conservation, monitoring, planning, development and operation (Department of Water Affairs and Forestry, 1997: 49). Management of the nation's water resources also needs to be

in a manner that ensures that all citizens have access to adequate basic services (Department of Water Affairs and Forestry, 1994: 34).

The policy reinforces that water allocation and use will need to assess competing water-uses at a catchment level on the basis of *optimum* use rather than simply beneficial use. Whatever arrangement is introduced, it must be clear that it will remain subject to national authority (Department of Water Affairs and Forestry, 1997: 49).

3.5.2.3 White Paper on Basic Household Sanitation (2001)

This policy can be seen as more technical in nature as it outlines a wide range of technical options for provision of sanitation services to choose from. These range from various improved latrines, septic tanks, composting latrines to full water-borne flush toilets (Department of Water Affairs and Forestry, 2001: 17).

The policy defines minimum acceptable basic level of sanitation as (Department of Water Affairs and Forestry, 2001: 6); appropriate health and hygiene awareness and behaviour; a system for disposing of human excreta, household waste water and refuse, which is acceptable and affordable to the users, safe, hygienic and easily accessible and which does not have an unacceptable impact on the environment; and, a toilet facility for each household. The policy does indicate that higher standards can be applied. However, there is a direct correlation between the standard of service and the cost, both in terms of initial capital and operation and maintenance. Where higher standards of service are to be provided, the costs will not normally be supported by the programmes of the Department (Department of Water Affairs and Forestry, 1994: 14).

The non-alignment of sanitation policies can be a cause of confusion amongst role players. Role players require certainty on matters such as tariff policy, free basic water policy, eligibility for funding, policies guiding the development of bylaws and policies regarding health, hygiene and environmental matters. A review will be undertaken of municipal bylaws to ensure compliance with regulations regarding sanitation under the Water Services Act and regulations regarding wastewater standards under the National Water Act. An important function of the co-ordinating structures discussed in the next section will be to ensure that the policies of the different national government departments and the different spheres of government are aligned (Department of Water Affairs and Forestry, 2001: 16).

3.5.2.4 Strategic Framework for Water Services (2003)

With the shift in roles and responsibility in the water services sector, South Africa introduced the Strategic Framework for Water Services (SFWS). The SFWS provided a comprehensive approach to provision of water services in South Africa, including provision of services across the range of settlements types" (i.e. from small communities to large regional schemes). The SFWS outlined the changes of approach that were needed to achieve the Constitutional role of local government in provision of water services and to achieve policy goals and imperatives in this sector.

The SFWS, published in 2003, provided the 10-year vision for the water services sector of the country. The purpose of the Strategic Framework was thus to put forward a vision for the water services sector in South Africa for 2003-2013, and to set out the framework that would enable the sector vision to be achieved. With the 10-year strategic timeline of the SFWS, there have been numerous changes to the water services landscape in which the SFWS was developed and implemented, including changes in national imperative, changes to water policy, legislation and strategies, changes in municipal boundaries, local government operations and WSA formalization and changed in the sector itself. Combined, these changes have shaped a very different water services sector in 2013, as compared to 2003.The current water service landscape included the NDP and Medium Term Strategic Framework (MTSF) with their goals and targets, the Strategic Infrastructure Project 18; the Sustainable Development Goals of the UN; the new water policy imperatives emanating from the National Water Policy Review (NWPR) instituted by the Minister of Water in 2013; the water legislative review which was underway and the National Water Resource Strategy 2 (2012).

3.5.2.5 National Water Policy Review (2013)

The National Water Policy for South Africa (1997) which informed the drafting of the National Water Act, 1998, is still considered valid; however, the implementation of this policy has not been without challenges, specifically in reforming the profile of the water sector. Much of the allocated water in the country remains in the hands of a small minority. This suggests that the majority of the population continue to experience inequitable access to the benefits of water. With very small volumes of unallocated water, there is little available for allocation, reallocation or redistribution to change the profile of this sector.

To address these equity challenges there was a need to introduce innovative ways to ensure fair and equitable access to water. This to be achieved while protecting, using, developing, conserving, managing and controlling our water resources in an efficient, effective and sustainable manner. In response to these implementation challenges the then Department of Water Affairs, initiated a National Policy Review in 2013. The resultant policy positions were approved by Cabinet in 2013 to improve the process of reforming the profile of the water sector by strengthening equity principles in the existing water policy and legislation.

In the centre of the National Water Policy Review of 2013 was transformation in the water sector in placing water at the centre of development, water allocation reform and integrated and multiple water use across the entire water value chain. This policy has a strong focus on assisting the water sector to address equity and redress imperatives. It does not replace earlier water policy i.e. National Water Policy of South Africa 1997, rather provides amendments to address omissions or gaps in these original policies, while reaffirming key water principles in the country. Therefore, this policy be supplementary to provisions of earlier water policies.

The 2013 National Water Policy Review addressed the most pressing policy gaps experienced in the country and allowed for the strengthening of provision of the policy to address issues which had not shown significant progress in the past 20 years of implementation, including the issue of equity in access; provision of higher levels of basic services; free basic water services to the poor and challenges in the current structure of the South African water institution.

3.5.2.6 National Sanitation Policy (2016)

This National Sanitation Policy Review provides policy positions to address the identified policy gaps and challenges, as well as to address the country's new national and international development imperatives. This policy review adopts many of the strategic policy positions outlined by the Strategic Framework for Water Services (SFWS) of 2003. It is envisaged that the SFWS will in future be replaced by a water and sanitation strategy. This policy review thus includes the SFWS policy positions which must be sustained to ensure a sustainable sanitation sector in the country.

The sanitation sector is a diverse sector made up of a number of stakeholders and institutions. The key institutions which are affected by this policy review include the local government sector, public sector, research and innovation sector, nongovernmental and private sector.

The policy also endorses the national sanitation targets, as outlined in the National Development Plan (NDP) and Medium-Term Strategic Framework (MTSF). In addition, it gives effect to the International Sustainable Development Goals (SDG).

The purpose of this policy review was to provide amended policy positions which outline additional, new or updated courses of actions which the government wishes to adopt in pursuit of national water objectives in the future. Of the 12 policy positional amendments recommended in the NWPR, at least half impact on the SFWS and demonstrate changes to water services policy.

The National Sanitation Policy 2016 seeks to strengthen equity and dignity of all South Africans by enhancing current sanitation policies. It goes beyond current policies that are mainly focussing on redress to deal with imbalances of the past in terms of access to basic sanitation levels of services across society. It is forward looking in terms of improved levels of services, innovative and appropriate technology to ensure sustainability and improving the lives of the poor.

It provides alignment with the Government's outcome 8 and service delivery that is pro-poor. It also aims to address the protection of all people's health as well as the protection of the country's water resources. The National Sanitation Policy 2016 further aims to strike the balance between allocating financial resources to support investments in higher levels of service, providing services to underserved households, while also maintaining and refurbishing existing sanitation infrastructure. It puts people's well-being at the centre of development. It also aims to enhance the legislation and regulatory role of the Department that is informed by clearly defined sanitation policy.

It acknowledges that the sanitation sector is a diverse sector made up of several stakeholders and institutions. As such the key institutions which are affected by the sanitation policy include the local government sector, public sector and private sector. The policy provides policy positions to address the identified policy gaps and challenges, as well to address our new national and international development imperatives. And in addition, has successfully identified the following pillars:

- Integrated planning of sanitation services

- Institutional arrangements for sanitation services

- Participation in sanitation services

- Capacity and resources for sanitation service delivery

- Capacity and resources for sanitation service delivery

- Financial effective and efficient sanitation services

- Sustainable sanitation services

- Regulation of sanitation services

3.5.2.7 Principal Legislations Governing Provision of Water and Sanitation

The water policies were legitimised in the late 1990s by the promulgation of two new water Acts, namely the Water Services Act (No. 108 of 1997) and the National Water Act (No. 36 of 1998). Since the promulgation of these water and sanitation policies and Acts in the 1990s, the water and sanitation sector in the country has undergone a systematic process of change, restructuring both the water institutional arrangements and environment, including the organisational structure, policy, legislation, strategies and regulations.

The National Water Act aims to control the use of all water resources, to protect them from being abused and polluted, and ensure that every person has equitable access to water resources. A closely related Act is the Water Services Act (Act 108 of 1997) that aims, among other things to ensure and define the rights of access to basic water supply and sanitation services, to set out the rights and duties of consumers and those who are responsible for providing services and allow the Minister to set national standards (including norms and standards for tariffs) to ensure efficient, continuous, affordable and fair water services. The Water Services Act also promotes the effective and sustainable use of financial and natural resources and creates viable statutory institutions to assist local government to fulfil its obligations under the Act.

Based on several years of implementation of these two pieces of legislations and its related policies, there might be a need to consider their amendments in order to create an enabling legislative framework to provide access to water to all our citizens. The review should sorely be motivated by intention to accommodate recent development such as:

- Transformation in the water and sanitation sector – emanating from National Water Policy Review 2013;

- Alignment with the current national and international development agenda – National Development Plan 2030 and Sustainable Development Goals 2030;
- Alignment with the local government legislation, namely the Municipal Structures Act and Municipal Systems Act in 2000 which were promulgated after the Water Services Act, and has rendered certain respects of its provisions obsolete; and,
- Legislating the provisions of the approved National Sanitation Policy (2016)

3.5.3 Legislative Mandate to Provide Water and Sanitation

The Constitution of the Republic of South Africa, 1996 and Water Services Act, 1997 puts the responsibility of providing basic services and providing water and sanitation, respectively, squarely to local government. The Local Government: Municipal Systems Act, 2000 (Act No. 32 of 2000) and the White Paper on Local Government (1998) are the critical legislation guiding the delivery of services, including water and sanitation by local government (South African Human Rights Commission, 2014: 28).

The responsibility for the delivery of services remains with the municipality at a local government level, which is always the first port of call for public users that are not receiving or are having problems with their service. Ultimately, the municipality is responsible per Section 11 of the Water Services Act 108 of 1997, to "all consumers or potential consumers in its area of authority to progressively ensure efficient affordable, economical and sustainable access to water services". The provision of water and sanitation services is an obligation recognized in the Sustainable Development Goals (SDGs). Goal 6 of the SGDs translate to: improved access to water and sanitation; improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials; halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally (United Nations Habitat, 2016).

In terms of the South African legislative frameworks governing the water and sanitation sector as discussed above clearly defines institutional roles and responsibilities in the water and sanitation value chain. All the legislations concur on the role of the Minister responsible for water and sanitation as custodian with the national responsibility of ensuring that both the needs of people and of the economy which sustains them were effectively met. Whereas national department is responsible to manage and regulate water supply and sanitation in the country.

Prior to the establishment of local government, provision of water and sanitation was the responsibility of national government (Department of Water Affairs and Forestry, 1994: 2). Water Services Act and its related policies defines the role of local government (municipalities that are defined as Water Services Authorities) as that of implementation and management of water supply and sanitation services, operation and maintenance of services to residents/consumers, supported by national and provincial government. The Water Services Act introduces the Water Services Authority (WSA), defined as any municipality, including a Metro, District or Local council, responsible for ensuring access to water services. Notwithstanding that municipalities are, in effect, government bodies that have powers to make decisions on administrative rules to regulate communities under its jurisdiction. Section 156 provides that municipalities may make administrative by-laws for the effective administration of the matters that it has the right to administer.

The Strategic Framework for Water Services 2003 (SFWS) provides that a WSA may provide water services themselves and/or contract external water services providers to undertake the provision function on their behalf. A WSA has a primary responsibility for ensuring the provision of water services, more specifically the WSA had the following roles and responsibilities:

  o Ensuring access – ensure realization of the right to access, particularly basic water services, subject to available resources.

  o Planning – prepare water services development plans to ensure effective, efficient, affordable, economical and sustainable access which promote sustainable livelihoods and economic development.

  o Regulation - regulate water services provision and water services providers within their area through the enactment of by-laws and the regulation of contracts.

  o Provision - ensure the provision of effective, efficient and sustainable water services either by themselves or through a contract with an organization to provide the service.

The SFWS further obliges a WSA with a universal service obligation to ensure that all people living within their jurisdiction were progressively provided with at least basic water services.

3.5.4 The State of Access to Water and Sanitation Post-1994

Despite strides by government in trying to provide equitable services and improve lives for all, there are still challenges relating to, amongst other things, the pace of delivery, sustaining services provided, fast growing demand, etc. Although access to water and sanitation has increased over the years, research shows that sub-Saharan Africa is still experiencing unimproved provision of these basic services. Globally, 2.6 billion people have gained access to an improved drinking water source since 1990. However, in 2015, it was estimated that 663 million people worldwide still use unimproved drinking water sources, including unprotected wells, springs and surface water.

Nearly half of all people using unimproved drinking water sources live in sub-Saharan Africa; while one fifth live in Southern Asia (World Health Organisation, 2015:7). In terms of sanitation, the global Millennium Development Goals (MDGs) target of 77 per cent has therefore been missed by nine percentage points and affecting almost 700 million people. Despite encouraging progress on sanitation, much unfinished business remains from the MDG period. In addition to the shortfall in the global target, large disparities in access still exist. Almost all developed countries have achieved universal access, but sanitation coverage varies (World Health Organisation, 2015: 12). The MDG's efforts to improve water and sanitation have not been achieved; therefore, most people lack the provision of water and sanitation in developing countries.

South Africa, as a signatory to the Millennium Declaration, pursued the MDG targets of halving the proportion of the population without sustainable access to safe drinking water and basic sanitation by 2015. By 2015, the end of this MDG era, the Update and MDG Assessment Report showed that South Africa had address the water supply MDGs and had made moderate progress with the sanitation target. Access of the South African population to improved water supply had improved to 93 % of the population in 2015, from 83% in 1990 (UNICEF and World Health Organization, 2015). The report shows that there were, however, disparities in access to improved water supply in 2015, with rural areas demonstrating much lower (81%) access to improved water supply when compared to 98% of urban households.

In addressing the sanitation target, the proportion of the 2015 population that gained access to sanitation since 1990 was 31% (UNICEF and World Health Organization, 2015). The Update and MDG Assessment Report indicated that to halve the proportion of the population without sanitation services the backlog would have need to reduce to 24% of households in 2015 and a total coverage of 76% of households (JMP, 2015). This indicates that access to improved sanitation had improved significantly from 51% in 1990 to 68% of the population in 2015. This however does not meet the MDG target. Like in a case of water, there are also disparities in access to improved sanitation in the urban and rural areas. The coverage of these services in the rural areas was much lower (61%) when compared to 71% of urban households, demonstrating inequity in provision of the services based on the locality of a household.

In South Africa, the South African Human Rights Commission (SAHRC) (2014:14) reported that, "areas which lack water and sanitation are the former homelands, townships and informal settlements and are dominated by the black and poor". This lack of access to sanitation has an impact on other rights including rights to dignity, education, health, safety and the environment." The causes of basic service delivery challenges regarding water and sanitation are broad and complex. Firstly, municipalities are faced with the task of improving the quantity and quality of those basic services being delivered to citizens. However, in the wake of the political and institutional reforms it has become clear that many municipalities throughout the country are facing severe capacity constraints and institutional weaknesses in delivering basic services effectively and efficiently (Vyas- Doorgapersad, 2010:44).

Kasala, Burra and Mwakenja (2016:24) indicate that many people in developing countries lack improved sanitation services. Some of the challenges contributing to such a situation include high rates of population growth without expansion of public services, short supply of skilled personnel, low political commitment, financial constraints, and lack of context specific technology. Water and sanitation services are critical as they have been included in the Sustainable Development Goals (SDG) as part of goal 6 which focuses on clean water and sanitation (United Nations, 2016).

The Sustainable Development Goals (SDGs) set up the global development framework which all countries need to align their development trajectories to, in order to address the development challenges of the 21st century. They are a plan of action for everyone and also focuses on the wellbeing of the planet and prosperity and reinforces the need for a paradigm shift towards a

sustainable development path. The SDGs consist of a set of universal development goals and targets that are directed towards creating a better and just life for all in society and advocate for collaborative partnership in order to alleviate all humanity from poverty traps and various socio-economic ills whilst ensuring environmental sustainability. The SDGs essentially build on the successes and the moral principles of the Millennium Development Goals with the primary objective being to 'leave nobody behind'. the SDGs consist of 17 goals and 169 targets that member states across the globe are mandated to implement in their development discourse (United Nations, 2016). The associated goals and targets must be achieved by 2030.

The inclusion of water and sanitation in the SDGs is an indication that a lot still need to be done to improve water and sanitation service delivery, especially in the developing countries. It also entails that new ways of improving access and delivery is needed to tackle the challenges experienced in developing countries.

In South Africa, statistics indicates that, there has been many protests in Gauteng province in 2014, due to service delivery followed by the Eastern Cape and KwaZulu-Natal (Municipal IQ, 2014). The reasons behind the eruption of service delivery protests include amongst others dissatisfaction with the delivery of basic municipal services, such as running water, electricity and toilets, especially in informal settlements, in South Africa and the high levels of unemployment, high levels of poverty, poor infrastructure, lack of houses, and empty and unrealistic political promises made during election times (Institute for Security Studies, 2014).

In all these events of service delivery protests seems to evolve around similar issues across the country. These issues include poor service delivery, low productivity, poor communication, poverty and unemployment, poor participation of communities in decision-making processes and lack of access to information, at the local government level (Gcamu, 2019).

The White Paper on Local Government (1998:23) states that "developmental local government is a government committed to working with citizens and groups within the community to find sustainable ways to meet their social, economic and material needs and improve the quality of their lives". The same views are shared by Nkuna (2011: 625) that "in its ideal and practice; the South African developmental local government forms the basis of state apparatus in that it is the sphere of government closer to communities". However, the purpose and approach of the developmental local government differs. Firstly, in terms of the new developmental mandate,

developmental local government is required to exercise a representative function with enhanced community participation to achieve service delivery, social and economic development and a healthy environment (Tsatsire, Taylor and Raga, 2010: 272).

The mandate of developmental local government therefore extends beyond service delivery to economic, social and health issues. Section 152 subsection 1 (b) and (d) of the Constitution provides that the constitutional objects of local government include the promotion of a safe and healthy environment and ensuring the provision of services in a sustainable manner. Developmental local government was established for several reasons. Prior to 1994, no single, uniform system of local government existed across the country; each province had its own configuration of local government institutions.

Local government as an institution of governance was subservient, racist and illegitimate. The subservience of local government was manifest in that local authorities existed in terms of provincial laws, and in that their powers and functions were dependent on and curtailed by those laws (Visser, 2009: 9). A new local government system as per the developmental mandate needed to build on the strengths of that system. Equally, it needed to address its weaknesses and build the capacity of municipalities to address the considerable challenges they faced (White Paper on Local Government, 1998: 10).

The mandate of local government requires new capacities, attitudes and approaches, which are only beginning to emerge. Relations between municipal councils and the administration, between management and the workforce, and between the municipality and service-users, need to be improved (White Paper on Local Government, 1998: 17). Section 27(1) (b) of the Bill of Rights of the Constitution of the Republic of South Africa, 1996 (the Constitution) made it clearly that the provision of basic services such as water and sanitation is a critical mandate for the citizens of the country.

The report published by the Statistics South Africa, entitled "The state of basic service delivery in South Africa: In-depth analysis of the Community Survey 2016 data /Statistics South Africa" (Statistics South Africa, 2016: xiii) shows discrepancies in basic service delivery if comparing the so-called urban and rural municipalities in that households in rural municipalities generally have access to poorer service levels.

According to the key results from the 2011 Statistics South Africa Census, indicates that 46.3% of households in South Africa have access to piped water and just over 85% have access to water that is of a Reconstruction and Development Programme (RDP) acceptable level. This level of access, however, is not reflected across all provinces in the country. In Eastern Cape, 31.1% of household do not have access to water of an RDP-acceptable level while the same is true for 27.2% of households in Limpopo.

Information from the most recent Stats SA census shows that just over 60% of households have access to sanitation *via* a flush toilet, while just over 70% of households have access to sanitation that is of an RDP acceptable level. Again, this level of access is not enjoyed across the country. Almost two-thirds of Limpopo does not have access to sufficient sanitation, while just under half the population in the Mpumalanga and North West provinces do not have sufficient access. KwaZulu-Natal also has a below average level of access to sanitation. Of particular concern is the Eastern Cape, where 12.7% of households do not have access to any form of sanitation and the Free State, Northern Cape and Western Cape provinces, which have a large number of households still using a bucket for sanitation. It is important to note that the bucket system should have already been completely phased out by government.

Through the provision and the efforts of government, support agencies and existing stakeholders, there has been significant improvement in terms of access to both water and sanitation. This is reflected in the latest Statistics South Africa's General Household Survey 2017. The findings of the survey indicate that the percentage of households with access to piped water has increased to 88.6 in 2017 while the percentage of households without sanitation, or who used the bucket toilet system decreased from 12,6% to 3,1% between 2002 and 2017 (Statistics South Africa, 2017: 4). Nationally, the percentage of households with access to improved sanitation increased from 61.7% in 2002 to 82.2% in 2017 (Statistics South Africa, 2017: 41).

3.5.5 Broad Challenges Facing Water and Sanitation Sector

Du Toit and Pollard (2008: 708) highlight three main challenges that relates to integrated water resource management at the catchment level includes, public participation not planned in a holistic way; different levels of engagements not clarified; and, procedures too elaborate and sophisticated for initial stages of public engagements.

The World Bank report on *Accountability in public services in South Africa (2011:67)* suggests that although access to water and sanitation has improved in South Africa, some challenges such as quality of water and nature of services based on type of human settlement. The report finds that "farm workers continue to receive poor quality water, and many rural areas in municipalities and informal settlements have no access to water at all. Sanitation services are generally poor: communities still use the bucket system in many municipalities— particularly in rural areas" (World Bank, 2011: 67).

Based on the *Strategic Overview of the Water Sector in South Africa 2013 report,* the Department notes that balancing water requirements and water availability becomes one of the main challenges acknowledged by the department (Department of Water Affairs, 2013: 8). The Department of Water Affairs (Department of Water Affairs), in its report on the *Status of Sanitation Services in South Africa* (2012), highlights that "challenges faced by municipalities ranged between how to service informal settlements, farm dwellers, dealing with difficult ground conditions, planned new housing developments where existing bulk infrastructure is already overstretched, how to deal with full Ventilated Improved Pit Latrines (VIPs), water supply inadequacies, bucket eradication, maintenance of sewers, sub-standard wastewater effluent discharges" (Department of Water Affairs, 2012: 8). These challenges are aligned to the ones raised above, except that these are more at the implementation level. They relate to operational and technical expertise.

3.6 HISTORICAL CONTEXT OF POLICY MAKING IN WATER AND SANITATION

According to Otieno Juma and Onkware (2015: 834) policy formulation "involves the development of pertinent and acceptable proposed courses of action for dealing with public problems. Many types of formulation can be identified depending on the criteria for classification. Formulation aims at getting a preferred policy alternative approved; an affirmative decision is the reward of the whole process".

The literature confirms the view raised by Phuhlisani (2009: 13) which highlights the need to understand the complex, multi-level, messy and often contested nature of the policy development process. While there are moves to 'professionalize' and 'modernize' the policy process and make use of project management methodologies to analyse problems, assess evidence, formulate alternatives and consult with key actors and stakeholders, this approach is

shadowed by concerns that responsibilities for policy making and implementation are being conceptualized within a narrow and increasingly technocist policy community.

According to Gumede (2008:11), public sector institutions are integral to the public policy making process. Inherently, they influence the public policies and their implementation. Fox *et al.* (2006:12) claim that the Institutional model is premised on the basis that public policy is the product of public institutions, whose structures are responsible for public policy implementation. This, therefore, highlights the dependency factor of public policy to Institutional model.

Since public policy formulation shapes and informs the implementation of formulated public policy, its legitimacy is bound to lubricate attitudes of actors and promotes ownership or sense of belonging, which in turn will help create a favourable climate for effective public policy implementation. One of the primary factors in all stages of the public policy process is the involvement of all actors (role-players and stakeholders). Involvement of all the actors harnesses the resources in a coherent and purposeful way. Roux (2005:83) claims that the extent of involvement of all the actors also depends on the nature of the public policy. This suggests that intensity and vigour of involvement of actors in the public policy process, centres on the interests of actors on the public policy at hand, interlinked with the stage of public policy process in which such interest is invigorated.

Gumede (2008:07) stipulates that the nature of the public policy process in South Africa is encapsulated in seeking partnerships with the rest of society. This suggests collective contribution to the public policy process. Public policy making in its nature is multidisciplinary and complex. The diverse but shared responsibility should be provided with the opportunity to influence policy, in accordance with society-specific goals.

The introduction by Minister Kader Asmal to the White Paper (Department of Water Affairs and Forestry, 1997:2) supposed that "South Africa's water law comes out of a history of conquest and expansion. The colonial lawmakers tried to use the rules of the well-watered colonising countries of Europe in the dry and variable climate of Southern Africa. They harnessed the law, and the water, in the interests of a dominant class and group which had privileged access to land and economic power. It is for this reason that the new Government has been confronted with a situation in which not only have the majority of South Africa's

people been excluded from the land, but they have been denied either direct access to water for productive use or access to the benefits from the use of the nation's water. The victory of our democracy now demands that national water use policy and the water law be reviewed. Our Constitution demands this review, on the basis of fairness and equity, values which are enshrined as cornerstones of our new society". This utterance provides a socio-political context of water policy and underlying factors that required immediate attention after 1994.

The major (macro) stages of water policy development in South Africa included constitutional development, the development of the Water Law Principles (Department of Water Affairs and Forestry, 1996), the White Paper on a National Water Policy for South Africa (Department of Water Affairs and Forestry, 1997), the National Water Act (1998) and implementation initiatives such as the establishment of the National Water Resource Strategy (Department of Water Affairs and Forestry, 2002).

In a meta-policy context, the development of the White Paper should be viewed in the context of several other major policy developments such as the RDP (South African Government, 1994) and Growth, Employment and Redistribution (GEAR), Batho Pele (people first), the White Paper on Local Government and many others. Several policy initiatives are also apparent in the water related area, especially the Strategic Framework on Water Services (2003) as well as the White Paper on Water Supply and Sanitation (1994), and at a later stage the White Paper on Basic Household Sanitation (Department of Water Affairs and Forestry, 2001b).

Figure 5: Water and sanitation related policies, legislations and strategies (1994-2013)
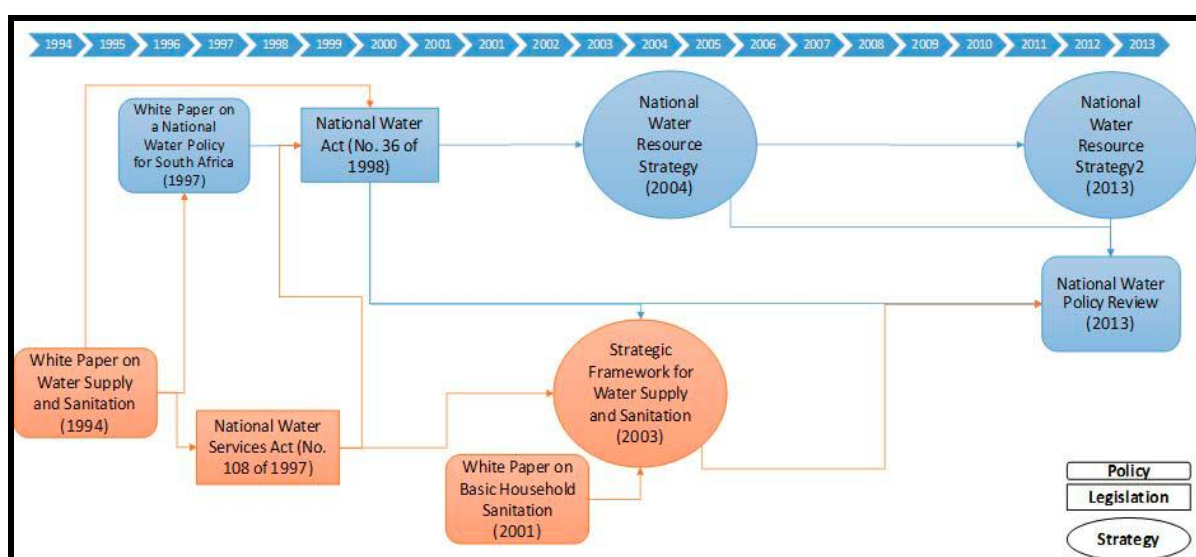
Source: Water Research Commission, 2018:14

MacKay (2003) argues that "In 1994, … provision of basic water supply and sanitation to the majority of South Africa's population who were without these, and the need for equity in the allocation of water and the benefits of water use, were suddenly placed at the top of the agenda…." This assertion illustrates the urgency that government faced immediately after attainment of democracy to put measures in place for governance and service delivery.

3.6.1 Policy Development and Design Overview

The Department of Water and Sanitation (DWS) is the custodian of South Africa's water resources. It is primarily responsible for the formulation and implementation of policy governing this sector. It also has override responsibility for water services provided by local government. While striving to ensure that all South Africans gain access to clean water and safe sanitation, the Department also promotes effective and efficient water resources management to ensure sustainable economic and social development (http://www.enviropaedia.com/company/default.php?pk_company_id=183 accessed 28 July 2017).

The Department of Water and Sanitation's (DWS) legislative mandate seeks to ensure that the country's water resources are protected, managed, used, developed, conserved and controlled by regulating and supporting the delivery of effective water supply and sanitation (http://www.gov.za/nr/about-sa/water-affairs accessed 28 July 2017).

Section 155 subsection 7 of the Constitution gives national government the mandate to regulate water services. This mandate shifts the department's role from water services provider and "player", to that of regulator or "referee", a vision that was advanced in the 2003 Strategic Framework for Water Services. As the national regulator, DWS has legal recourse against non-compliance by WSAs, as well as the ability to hand over water services functions to different departments or spheres of government if there is a major problem. DWS will also be able to intervene in service delivery if there is a gross failure on the part of a Water Services Authority (WSA) and where lives and/or the environment are at risk (Socio-Economic Rights Institute of South Africa (SERI), 2011: 51).

South Africa has been branded as a country with well-developed, systematic manner of developing, gazetting and implementing national legislation, including water legislation. Since

1994, the Department responsible for water and sanitation has developed a number of policies and some of them culminated into legislations. Those includes, but not limited to, the following:

- White Paper on Water Supply and Sanitation (1994) which provided the countries hopes, methods and principles to achieve water supply and sanitation;

- White Paper on National Water Policy for South Africa (1997) which provided the water resource vision for the country;

- White Paper on Basic Household Sanitation (2001) which provided additional policy related to sanitation in the country;

- National Water Policy Review (2013) which provided policy amendments to the 1994 and 1997 White Papers;

- The Water Service Act (No. 108 of 1997) which was the law for the water services sector of the country;

- The National Water Action (No. 36 of 1998) which was the law for water resource management (including water resources used for water services) in the country;

- The Strategic Framework for Water Services (2003) which outlines the implementation protocol for achieving South Africa's water supply and sanitation aspirations;

- National Water Policy review (2013) which aimed at addressing equity in access to water services and resources, and the benefits from its use through economic, social and environmental development and management through the use of the water allocation reform programme and proposed mechanisms, which include water set aside specifically for redress, compulsory licensing, general authorisations, development support and partnerships to ensure that water is available to previously disadvantaged groups.

- The National Water Resource Strategy 2 (2013) which provided the implementation protocol for water resources in the country; and,

- National Sanitation Policy (2016) which provides necessary amendments to accommodate aspects of the changed service delivery environment and priorities since 2001, and to address gaps identified by the sector. This National Sanitation Policy provides policy positions to address these gaps and challenges, as well as to address new national and international development imperatives.

The process of developing a mandatory policy and its translation into legislation commences with the publishing of a discussion document called a draft Policy Document or Green Paper. The Green Paper is drafted in the Ministry or department dealing with a particular issue. This discussion document provided the general thinking that informs a particular policy. It is then published for comment, suggestions or ideas. A submission date is usually given for input from stakeholders and civil society.

This leads to the development of a final refined policy document, a White Paper (referred to as the Policy), which is a broad statement of what a government hopes to achieve and the methods and principles it would use to achieve them. It states the goals of the department. A policy document is not a law, but it would often identify new laws need to achieve its goals. Following the publication of a White Paper, the Minister and officials within the State department concerned could draft Legislative Proposals. Occasionally this document could be gazetted as a Draft Bill, for comment by a defined date, or given to certain organisations for comment.

Once all comments had been considered the document is taken to the State Law Advisers who check the proposals in detail and their consistency with existing legislation. These proposals were then printed by Parliament, given and tabled or introduced in either the National Assembly or the National Council of Provinces. The document is now no longer a Draft Bill. It is a Bill and the introduction or tabling is called the first reading. When both Houses had passed the Bill, it is allocated an Act number and then goes to the State President to be signed. It is then published in the Government Gazette as an Act and becomes a law of the land.

Sometimes there were no Green and White Papers and the process begins with the legislative proposals originating in the Ministry or Department. South Africa produces national strategies, which provide the roadmap for implementation of the relevant policy and legislation.

The South African water and sanitation policies were developed within a particular legal, institutional and international landscape, all of which were factors in determining the success of implementation of the policies. With the dawn of new democratic system, the lack of water supply and sanitation services was seen as a key symptom of poverty and underdevelopment (DWAF, 1994: 4). The provision of such services was deemed to be necessary for a successful development strategy in the country. Hence, the Reconstruction and Development Programme (RDP) introduced a minimum water supply volume to the country, indicating that the plan was

to supply 20 to 30 litres of clean water each day to every person within two years, and 50 to 60 litres a day within five years from a point no more than 200 metres from their dwelling. Similarly, the RDP indicated that all homes must had sanitation and refuse collection within two years.

The Constitution of South Africa is the cornerstone of water policy and legislation in the country. Sections 24 and 27 under the Bill of Rights (Chapter 2) contained in the Constitution ensure the rights of individuals to the environment and water. It is therefore becoming the duty of the Government to ensure that water and sanitation policies ensured prevention of water pollution, that there was sufficient water to maintain the ecological integrity of our water resources, and that water conservation and sustainable "justifiable economic and social development" is promoted (Department of Water Affairs and Forestry, 1997: 11).

At the time of developing the new water and sanitation policies for South Africa, the existing legal understanding of water use was based on a link between the right to use water and the ownership of land adjacent to that water (the riparian principle). Access to water, thus remained heavily skewed in favour of a privileged minority of private landowners in the country. There was a need in the new policy to develop the means of balancing the growing demands on a variable resource, to strengthen the role of Government as the guardian of the public interest (Principle 12 - White Paper on a National Water Policy for South Africa) and to ensure equity in the sector as a whole (Department of Water Affairs and Forestry, 1997: 22).

At the time of developing the water policies for the country, there were significant disparities in equity in access to the water resources of the country. This was particularly true for the rural and peri-urban areas and areas of the country which formed part of the former homelands. Water rights and access to water supply and basic sanitation was viewed by the new democratic government as one of the most critical developmental priorities in South Africa. At the time of the first democratic election in the country, an estimated 15.2 million people (12 million in rural areas) lacked access to basic water supply (At the time, **Basic Water Supply** was defined as 25 litres per person per day, within 200 metres of the home, and of acceptable quality. Basic sanitation was defined as a Ventilated Improved pit latrine or equivalent. These definitions had since been modified) and 20,5 million people lacked basic sanitation services. Targets were set to provide each individual with at least 25 litres of water per day within 200 metres of their

home, and to provide each household with basic sanitation in the form of at least a Ventilated Improved Pit (VIP) latrine (Department of Water Affairs and Forestry, 2002).

The water development vision at the time of writing the water and sanitation policy included Productive use, Sharing, Water development, use and protection was a common endeavour, Growth and development were not opposing goals, Participation, Protection of water resources, and Economic value of water. This vision for the water sector of South Africa provided the framework for the development and implementation of the new water policies of the country.

3.6.2 The State of Policy Making and Implementation in Water and Sanitation

The Department of Water and Sanitation (DWS) oversees and regulates the water business through appropriate policies and regulations which are implemented through its 9 provincial offices and 4 water management clusters. The DWS also monitors the performance of the sector and regulates the drinking water quality and effluent quality against industry standards and recommends changes to the business environment within which the various role players have to perform. Currently National water strategies are supported by regional and local plans, notably catchment management plans, provincial growth and development plans, bulk water supplier business plans, water master plans and water services development plans.

The findings of policy assessment (1994-2003) indicates that, "in the case of the water policy, the formulation of the White Paper on a National Water Policy for South Africa was very much embedded in the law review process. During the last year, in various workshops with DWAF managers and officials, the remark has often been made that despite having and using almost no theoretical knowledge of policy process models, the water community in South Africa followed a logical, participative, legitimate and otherwise sound process. However, the unplanned nature of the policy process as well as the dominance of the legal drafting process, did impact negatively on the water policy process, notably on the limited time and effort spent on the policy analysis and formulation phase. In some areas, such as preliminary objective setting prior to the White Paper or the legal review, the NWP shows some remarkable experiences in soliciting public comment and consultation prior to formal processes" (de Coning and Sherwill, 2004).

Water and sanitation governance are designated as national government competency in terms of all existing legislative frameworks. In a similar vein, the function to provide water and sanitation services to communities is designated as a primary responsibility of local government or municipalities, with national government support and regulator. This kind of relationship between national government and municipalities should be understood within the context of cooperative governance between the DWS and municipalities as well as communities and other line institutions if they were to realize the common objective of sustainable development and improvement of livelihoods.

According to the National Water Act, 1998, National Government, acting through the Minister, is responsible for the protection, use, development, conservation and management of water resources in accordance with the Constitutional mandate for water reform. Being empowered to act on behalf of the nation, the Minister has the ultimate responsibility to fulfil certain obligations relating to the use, allocation and protection of and access to water resources. In essence, the Minister remains the only custodian of the nation's water resources (Fundamental principles of National Water Act, Act 36 of 1998). The Water Services Act, 1997 (Section 3 and 71 of the Water Services Act, Act 108 of 1997), sets out access to basic water supply and sanitation as a basic human right as set out in the Constitution of the Republic of South Africa (Section 24 and 27 of the Constitution of the Republic of South Africa, 1996). Provides for general powers of the Minister in regulating and facilitation for the realization of such basic human right.

The Department of Water and Sanitation has recently drafted the departmental Standard Operating Procedures (SOP) for policy development. The aim of the SOP was to create a clear approach and guideline to the development, implementation and management of all DWS departmental policies and to ensure that those members of staff involved are clear as to their roles and responsibilities, so the policies are developed and implemented in an efficient, cost effective and consistent manner. The SOP acknowledges the importance of translation of credible research findings and recommendations into influential policy decisions insofar as they impact on water and sanitation strategic objectives. The SOP further provides a distinction between departmental operational and national strategic policies in terms of their development within the Department. All policies developed by the DWS supports the Departmental strategic objective of creating an enabling environment for the management of water resources and the provision of basic water and sanitation services across the sector.

3.6.2.1 Policy Development

The DWS considers policy as means to communicate the rules and principles to guide decisions. It is sometimes considered as a statement of intent or commitment on which the Department's processes are based. Therefore, any policy of the Department should support the vision, mission and goals thereof. Good policy documents should consist of the following:

- Clear, concise and simple language;
- What is the rule of the Department rather than how to implement the rule;
- Clear authority (including a designated policy expert);
- Consistent and logical framework for the Department's action.

The process of developing policies in the department is understood as dependent on the nature of the policy being developed. However, the policy development process should strive to involve as many stakeholders as possible in order to benefit from their contributions (content, financial and human recourses) as well as gain their support for the process. Although it is difficult to develop a uniform model to develop a policy but the SOP outlines standard policy requirements for the department. Those are: the structure and format, content, the need and scope for a policy, Research and drafting process.

3.6.2.2 Research and Evidence in Policy Development

The SOP advocates for research evidence to inform policy development. Based on research findings, the department will have to establish whether a new policy is required, or an existing policy has gaps and thus needs to be revised. This breeds evidence-based policy development. Evidence-based policy development is premised on empirical research to provide appropriate solutions for evolving reforms in policy to bring about informed decision making. This exercise will afford a policy owner/ researcher an opportunity to gather evidence and data which will guide/ inform the decision to either undertake a policy review or development.

3.6.2.3 Identified Policy Drafting Process and Procedure

The SOPs makes a distinction between the development of what is referred to as National Strategic Policies and Departmental Operational Policies. According to the DWS, National Strategic Policies refers to policies that are approved at Cabinet level (Executive) or at Parliament level (Legislature). Departmental Operational policies are the ones that are approved at Ministerial level, which is internal in nature and aimed at operationalizing strategic

intents of national policies. It defines internal processes and procedures of getting things done. Procedurally, those policies, differs as illustrated in figures 6 and 7 below:

Figure 6: National Strategic Policy Development Process

Step 1: Conduct Research and Identify gaps

Step 2: Develop concept paper/ discussion document→ Consult internally →Translate discussion document into draft policy→Draft SEIAS report phase 1 & submit to DPME for comments

Step 3: Present draft policy to Top Management for comments and approval to undertake internal and external consultations

Step 4: Draft submission & cabinet memo to the DG to present to FOSAD TWG and cluster/s→submit agenda item/s

Step 5: Submit relevant documents to Cluster secretariat two weeks prior meeting

Step 6: Present draft policy/ies to FOSAD TWG→ Revise draft accordingly→ Present draft Policy/ies to FOSAD cluster/s →Revise draft policy accordingly

Step 7: Present draft policy to Top Management →Submit to the Minister (attach cabinet memo & SEIAS report) to obtain cabinet approval to gazette for public comments (NB: if it's not a national policy, Minister may grant approval to gazette)

Step 8: Minister to present the draft policy to the relevant cabinet Cluster

Step 9: Minister to present draft policy at a cabinet meeting for approval to **gazette for public comments**

Step 10: Draft Ministerial submission to gazette and issue notice of gazette; Prepare a consultation and communication schedule/ plan

Step 11: Undertake Public consultation in line with the approved consultation period

Step 12: Revise draft policy in accordance with the comments→Draft SEAIS report phase 2 & submit to DPME for comments & certification Present to Top Management

Step 13: Follow/ Undertake step 4, 5 & 6.

Step 14: Submit final draft policy to the Minister (attach cabinet memo, comments register & SEIAS report) for presentation to cabinet for approval.

Step 15: Minister to present final draft policy to relevant cabinet committee/s

Step 16: Minister to present final draft policy to Cabinet for **approval**

Source: Draft Standard Operating Procedure for Policy Development, DWS, 2017

Figure 7: Departmental Operational Policy Development Process

Step 1: Conduct Research and Identify gaps

Step 2: Develop concept paper/ discussion document

Step 3: Present concept/ discussion document to Top Management for comments and approval to undertake internal and external consultations

Step 4: Undertake internal and external consultations

Step 5: Revise draft policy

Step 6: Present to Extended Top Management for comments and endorsement

Step 7: Submit to the Minister for approval

Source: Draft Standard Operating Procedure for Policy Development, DWS, 2017

3.6.2.4 Policy Approval and Decision-making

National strategic policies require Cabinet or Parliament approval. Depending on the nature and extent of the policy, some strategic policies require to be presented to the relevant Forum of South African Director-Generals (FOSAD) clusters before being presented at Cabinet Committees and Cabinet meeting for approval to gazette for public comments or approval. For the purposes of policy coordination and intergovernmental relations, strategic policies are first presented to FOSAD clusters before being presented at Cabinet committees and Cabinet meeting. The cabinet committees mirror the FOSAD clusters. These FOSAD clusters are as follows:

- Economic sector, Employment, Infrastructure development Cluster
- Governance and Administration Cluster
- Social Protection, Community and Human Development Cluster
- International Cooperation, Trade and Security Cluster
- Justice, Crime Prevention and Security cluster

Each of these clusters consists of a number of departments represented in accordance with their cross-cutting interests and mandate.

Departmental operational policies are the instruments and practices by which organizations rationalize and continuously improve the work they do through available knowledge and technology. This family of policies includes team synergy, decision structures, methods, project selection, standards, systems and procedures that yield high performance and consistently respond to changing circumstances. While strategic policies dealt with the substance of what the department is about, operational policies deal with the process of getting the job done. Operational policies require ministerial approval. This is because these policies seldom have cross-cutting departmental interests. Thus, they are not national policies.

3.7 TOWARD EVIDENCE BASED POLICY MAKING IN SOUTH AFRICA

For several years, South Africa has been using an opinion-based approach to policy making (DPME, 2014; Paine Cronin and Sadan, 2015). In the early 2000s, the debate about the need to shift to evidence-based approach started. This debate has been translated into government policy statement. The National Development Plan (NDP), which is the blueprint policy document that defines South Africa's development trajectory with the time horizon of up to

2030, has highlighted the need for the use of Evidence-Based Policy Making and Implementation (EBPM&I) in order to improve the effectiveness of government policies (SAGNA, 2015).

This government position is founded on the basis that if the best available evidence is understood and used, new policies and projects will be more effective and have a higher probability of success, thereby improving service delivery. In line with the commitments of the NDP, the Minister for Planning, Monitoring and Evaluation in the presidency asserts that in order for the country to achieve socio-economic transformation "we require evidence-based information in order to assist us in diagnosing the problems so that we may be able to prescribe an appropriate remedy" (SAGNA, 2015).

Clearly there is shift in how public choices and decisions are being made globally on matter of policy and planning. This indicates the need for South Africa to also invest in this shift in its decision-making approach. South Africa has been hailed as having excellent policies but struggling with implementation (NDP, 2011: 417 and Tebele, 2016: iii). However, evidence points to the fact that South African policies are hardly or poorly informed by any evidence. This is evident in the work of Marais and Matebesi (2012), Paine Cronin and Sadan (2015) and Lukey (2016).

In addition, DPME has also partnered with various institutions (University of Cape Town and University of Johannesburg) to training various senior government officials on evidence-based policy. Based on this context, it is crucial that researchers also constructively contribute in these efforts to institutionalise evidence-based policy making. The existing literature indicates that this is a new phenomenon in South Africa.

The national government, through the Minister in the Department of Planning Monitoring and Evaluation (DPME) in the Presidency and the Chairperson of the National Planning Commission, Minister Jeff Radebe, emphasized the importance of evidence-based policy making and practice for improved governance towards achieving the objectives of the National Development Plan (NDP). He asserted that "in order for government to do these things better, we require evidence-based information in order to assist us in diagnosing the problems so that we may be able to prescribe an appropriate remedy" (South African Government News Agency, 2015). He further explained that evidence use is crucial in making government policies

and programmes that will maximise government's impact on society. This call comes in the wake of poor implementation and failure to effectively deliver services to communities (Komo and Tshiyoyo, 2015: 41).

If South Africa strives to achieve the goals and objectives as set out in the National Development Plan, the same emphasis on evidence-based decision making should also be placed at the level of local government planning. In the South African context, local government is constitutionally designated as a sphere of government that directly provides public basic services. Sutcliffe and Court (2005: 2) argues that, for developing countries, "there is the view that EBP approaches have the potential to have even greater impact on outcomes in developing countries, where better use of evidence in policy and practice could dramatically help reduce poverty and improve economic performance".

In the South African context, the Department of Planning Monitoring and Evaluation (2014:1) asserts that "Evidence-based policy-making (EBPM) helps policy makers and providers of services make better decisions, and achieve better outcomes, by drawing upon the best available evidence from research and evaluation and other sources. This includes decisions about:

- the nature, size and dynamics of the problem at hand
- policy options that might be considered to address the problem
- effective and ineffective interventions to solve the problem
- the likely positive and negative consequences of the proposed policy option
- the intended and unintended consequences of the proposed policy option
- effective and ineffective modes of delivery and implementation
- how long the policy will have to run before positive results will be achieved
- the resources that will be required to implement the policy
- the costs and benefits of the proposed policy, and on whom will these costs and benefits fall
- the sustainability of the policy economically, socially, and environmentally"

The Department of Planning, Monitoring and Evaluation acknowledges that government has successfully improved access to basic service delivery, increased its expenditure on them, reached to the previously neglected communities, promoted participatory and people centred

development, decentralised decision-making and developed several progressive legislative frameworks (DPME, 2010: 9). The next task was then to measure how much has been done, how much is being done and how much still needs to be done? This necessitated a shift in policy approach to outcome-based approach which allows for the policy development based on evidence in order to improve the effectiveness of policy implementation.

As indicated earlier on in this section that the concept of evidence-based policy making has its origins in the 1990s by the British Cabinet office, there were number of instruments that were introduced such as Regulatory Impact Analysis (RIA) or Cost-Benefit Analysis (CBA) to assist policy makers to develop policies that are future orientated. In 2013, the South African Cabinet, proposed and passed another instrument that assesses the potential impacts of policies and legislations before their adoption. Cabinet approved in 2013 the implementation of Socio-Economic Impact Assessment System (SEIAS). The system is aimed at improving and modernising the public policy making process in order to ensure that it is systematically integrate evidence and expertise, as argued by Howlett and Mukherjee (2017: 504).

South Africa's failing policy initiatives required government to reform their public management approach to ensure successful policy results. Policy M&E is a technique used in evidence-based policy to ensure that evidence used for policymaking is reliable, credible and valid. Evidence-based policy making process suggests that evidence is an integral part of every step of the public policy formulation process. Figure 8 below illustrates the findings by Paine Cronin and Sadan (2015) when interrogating the 'use of evidence in policy making in South Africa: An exploratory study of attitudes of senior government officials.

Figure 8: Findings on the use of evidence in policy making in South Africa
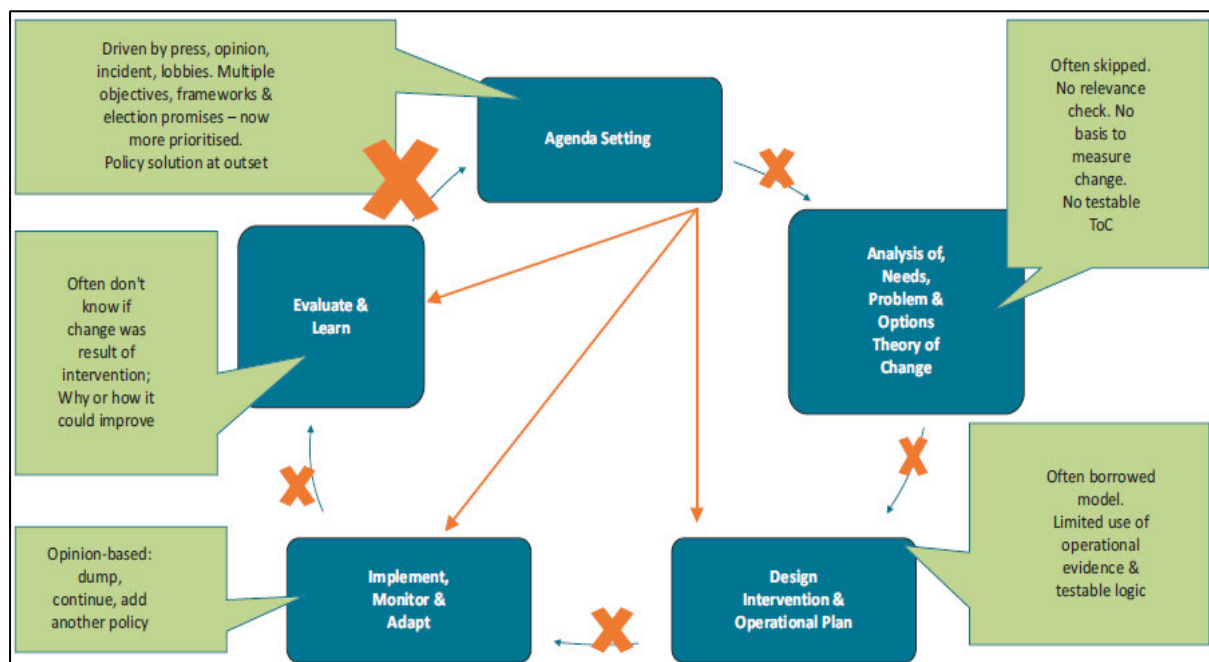
Source: Paine Cronin and Sadan (2015)

3.8 CHAPTER SUMMARY

This chapter provided brief insight of the policy environment in the democratic South African government. The above literature reflects that although tremendous progress has been made in meeting the basic needs of all citizens, some challenges persist. There is still more to be done with regards to the current intergovernmental relations in order to ensure the clear and precise definition of roles and responsibilities at the different levels of government. This clarity will further maximise the gains and progress made thus far as reflected by the Statistics South Africa reports such as General Household Survey 2016, General Household Survey 2017 and General Household Survey 2018.

In reflecting on the policy process that was followed in the water sector in South Africa, there's not enough documented (no literature, spatially dealing with sanitation aspect), and this is echoed by Mike Muller (2003). According to Muller (2003), "There is a huge amount left to do. But on reflection, we have not done badly, in water, over the past four years. I do not know what you make of it, but I am grateful for the opportunity to look back and reflect on how far we have come rather than compulsively looking forward to that new frontier" (de Coning and Sherwill, 2004). Departing from the work of the early years of democratic government, one

will expect a more formal process of policy development that is inclusive of the institutional environment that is needed for policy implementation i.e. recipients (WSAs).

Although this chapter provided an overview of all relevant water and sanitation policies and legislations, however, the National Sanitation Policy 2016 was used as a point of reference. The discussion of all other policies and legislations was merely to lay a foundation and provide proper understanding in terms of roles and responsibilities. Provide understanding of the institutional arrangements in the sector and how it evolved over time i.e. full establishment of municipalities in 2000 and related legislations. Since the focus is on municipalities, it is deemed appropriate that in order to obtain most recent experiences of municipalities in relation to the objectives of the study, the point of reference should be the National Sanitation Policy of 2016.

CHAPTER 4: RESEARCH METHODOLOGY

4.1 INTRODUCTION

The aim of this chapter is to outline the research methodology adopted for this study. The Chapter begins with a discussion of the research paradigm and methodology adopted. It presents the research design and tools and outlines the processes and procedures that were followed in planning, gathering of data, analyzing, interpreting and reporting on the findings. The Chapter thus explores the rationale for the methodology adopted, and the subsequent research design and approaches which aimed at responding to the research questions and objectives, namely:

Research Questions:

- How is public policy and its processes understood by the Department of Water and Sanitation?
- What is the process that is being followed by the Department of Water and Sanitation in ensuring that its policies are based or informed by evidence?
- How and by whom is evidence provided for the purposes of policy development in the Department of Water and Sanitation?
- What is the contribution of the Water Services Authority (WSA) to the policy process?
- What is the alternative model for an evidence-based policy in the water and sanitation sector?

Research Objectives:

- To examine the process of public policy making in the Department of Water and Sanitation.
- To establish the extent to which evidence-based policy making is used in the water and sanitation sector in South Africa.
- To identify the methods used and consultation processes used to collect evidence for the purpose of policy development within the Department of Water and Sanitation.
- To examine the level and nature of Water Services Authority involvement in the policy development process.
- To propose an alternative model to achieve evidence-based policy making process within the Department of Water and Sanitation.

But first, the discussion examines the philosophical position of the research approach.

4.2 RESEARCH PARADIGM

The research paradigm should be understood in terms of the epistemology, ontology and methodology adopted. Merriam Wester (2007: 464) defines paradigm as a "philosophical and theoretical framework of a scientific school or discipline within theories, laws and generalisations and the experiments performed in support of them are formulated". In simple terms, the paradigm can be summarised as a way of knowing and doing. It encompasses four main fundamentals, which are, ontology, epistemology, methodology and methods.

The Oxford dictionary defines ontology as referring to the "philosophy concerned with the nature of being" (South African Pocket Oxford Dictionary, 2001: 624). It is also understood as referring to the philosophical stance informing the methodology and as such, it provides context for the process and grounding its logic and criteria. Denzin and Lincoln (1998: 201) define ontology as a way of constructing reality, in terms of "how things really are" and "how things really work". Ontology is thus the study of being. Within the context of ontology, Creswell (1994: 4) argues that "the only reality is that constructed by the individuals involved in the research situation. Thus, multiple realities exist in any given situation". In more simple and practical terms, ontology relates to the way of constructing and attaching meaning to situations so that can be interpreted as sensible.

Epistemology refers to the theory of knowledge embedded in the theoretical perspective and thereby in the methodology. The Oxford definition states that "it is the branch of philosophy that deals with knowledge" (Southern Africa Pocket Oxford Dictionary, 2001: 296). For the qualitative research paradigm, the researcher interacts with those that are being researched (Creswell, 1994:6). The approach is inductive, and categories and themes are not predetermined, but rather emerge during the interaction, and based on the context, the information that emerges can help in the development of theories that are used to explain the phenomenon (Creswell, 1994:7).

According to Creswell (1994), humanities and social sciences research tend to adopt the four major approaches or paradigms when conducting studies. Those paradigms include, inter alia, constructivism/interpretivism, positivism/post positivism, critical and pragmatism. For

purposes of clearly illustrating how the chosen paradigm is different from the others, and why it is appropriate for this study, a brief overview of all four paradigms is presented.

4.2.1 Positivism/Postpositivism

According to Ponterotto (2005: 128), positivism can be defined as "a form of philosophical realism adhering closely to the hypothetico–deductive method", whereas postpositivism "arose out of dissatisfaction with some aspects of the positivist stance [because] positivists accept an objective, apprehendable reality, [while] postpositivist acknowledge an objective reality that is only imperfectly apprehendable". Denzin and Lincoln's description of the positivist belief is that "there is a reality out there to be studied, captured, and understood" (Denzin and Lincoln 1998: 8–9). This paradigm assumes that there is truth out there, but absolute truth cannot be found. Research in this regard is about empirical observations and measurements that are aimed at testing, refining and verifying theory (ies) that already exist out there.

4.2.2 Interpretivism/Constructivism

Ponterotto (2005: 129) views constructivism as an alternative to positivist paradigm in a sense that it "adheres to a relativist position that assumes multiple, apprehendable, and equally valid realities". This paradigm is about understanding multiple participant meanings. The position holds that meanings are constructed by humans as they engage with the world they are interpreting. They make sense of the world based on their social and historical perspective, thereby constructing a meaning based on the context or generation of a theory that gives meaning to the context.

4.2.3 Critical Realism

This paradigm comes with disruption and it challenges the status quo from the views of the postpositivist and constructivist approaches. The critical paradigm "is one of emancipation and transformation, one in which the researcher's proactive values are central to the task, purpose, and methods of research" (Ponterotto, 2005:129). This is done by going beyond just accepting that reality is structured in a socio-historic context and asserting that "reality and events" should be viewed through the "power relations" frame (Ponterotto, 2005:130). It emphasises the collaborative approach to problem solving. This paradigm is dialectical and focuses on bringing about change. It begins with a specific stance in relation to the power problem which has an oppressed-oppressor relationship and it aims for emancipation of the oppressed.

4.2.4 Pragmatism

Pragmatism as an alternative paradigm, also contests the "issues of truth and reality, accepts, philosophically, that there are singular and multiple realities that are open to empirical inquiry and orients itself toward solving practical problems in the 'real world'" (Feilzer, 2009: 3). This paradigm is pluralistic in its approach – it does not focus on only one system of philosophy, knowledge or reality. It is flexible and allows individual researchers to decide on relevant multiple approaches that can be used to meet their research needs. It does not subscribe to the notion of the world being an absolute unity, rather adopting what works for the specific problem. It is problem-centred – in a sense that it does not ask questions about reality and laws of nature but focuses on solving the social problems.

This study adopted a mixed method research approach, and in terms of the paradigms, it is located within the pragmatism social research paradigm. This research paradigm makes several assumptions in relation to how each views and approach research, and this study subscribed by those assumptions.

4.3 LIMITATIONS OF THE STUDY

Limitations refer to the potential weaknesses which might be out of researcher's control which might also have negative implications for the study. Creswell (1994: 110) defines limitation as an "[indication of] potential weaknesses in the design of the study". It was therefore important for the researcher to identify the possible limitations prior to conducting the study in order to come up with measure to minimise their impact or mitigate them, and to document limitations during the process of engaging with the study. It must be noted here that, at the onset of the research endeavour, the eThekwini Municipality indicated that there were **170** individuals who fell within the categories of employees whom the researcher intended to include in the quantitative part of the study. However, when the data collection process began, the researcher sought to confirm the contact details for these individuals and found that there were only **100** employees within the target population and sample. Despite this, the response rate was at **72%** of this total of **100,** which in terms of the arguments by Burger and Silima (2006: 666), is sufficient for a quantitative study.

4.4 RESEARCH METHODOLOGY

Kothari (2004:8), Ponterotto (2005) and Jonkowicz (2000) concur that research methodology is the design or framework adopted to systematically find solutions to the research problem, which includes the processes and steps to be used by the researcher to study the research problem. In simple terms, research methodology can be referred to as a systematic plan for conducting research. There are several methods that can be used which are either adopt a qualitative or quantitative methodological stance.

It is important to note that research methodology is different from research methods. Hall and Hall provide a clear distinction that methodology refers to the "philosophy or general principles behind research" while a research method refers to "the practice of research in terms of strategies and techniques" (Hall and Hall, 1996: 29). Methodology refers to the philosophy applied in carrying out a research study.

Additionally, research methodology must be further distinguished from research design. Marczyk, DeMatteo and Festinger (2005: 22) provide a clear distinction between the two terms by defining methodology as "the principles, procedures, and practices that govern research", while research design refers to "the plan used to examine the question of interest". There are three research methodologies known to the research world, namely: quantitative, qualitative and mixed methodology.

4.5 QUANTITATIVE vs QUALITATIVE METHODOLOGY

4.5.1 Quantitative Research Methodology

The quantitative research methodology answers questions about the relationship between two or more measured variables with the aim of explaining, predicting and or confirming phenomenon. It presents results in the numerical form. According to Creswell (1994: 4) the quantitative research methodology can also be referred to as "the traditional, the positivist, the experimental, or the empiricist paradigm". He further argues that this paradigm provides "quantitative or numeric description of some fraction of the population". The quantitative measurement informs the researcher how many or how much, which is always expressed in absolute numbers or presented statistically. Quantitative methods aim to classify features, count them, and create statistical models to test hypotheses and explain observations. Findings from quantitative data can be generalised. Data sets are large, and findings are representative of a

population. Documentation regarding the research framework and methods can be shared and replicated. Standardized approaches permit the study to be replicated over time (Goertzen, 2017: 13).

Like any other method, quantitative data has its shortfalls. Neuman (1997: 106) concurs with the earlier discussion that "quantitative research relies primarily on the assumptions of positivist approach to science". This implies that they always work with the unit analysis of casual relationship between variables in relation to the hypothesis of the study. Goertzen (2017: 13) summarises disadvantages of quantitative methodology as "data does not provide evidence for why populations think, feel, or act in certain ways. Specific demographic groups, particularly vulnerable or disadvantaged groups, may be difficult to reach. Studies can be time consuming and require data collection over long periods of time".

Data recorded and analyzed numerically through statistical techniques is quantitative and associated with quantitative research. In the contrary, qualitative research relies mostly on definition of the meaning of words, concepts and variables and their interrelationships, and depends on human interpretation and evaluation.

4.5.2 Qualitative Research Methodology

In simple terms, the qualitative research methodology offers descriptions and analysis of a research subject in the form of words, pictures or objects. This differs from the quantitative method in that, the qualitative methodology accepts that the goal of science is to discover the truth that exist in the world and use scientific method to build a more complete understanding of reality. Creswell (1994: 4) provides concepts and theories that are used to refer to the qualitative paradigm as "constructivists approach or naturalistic, interpretative approach, the postpositivist or postmodern perspective". He further acknowledges that there are several assumptions that the qualitative research approach makes that distinguish between qualitative and quantitative research. Those assumptions relate to the process, meaning, primary instruments, and fieldwork, descriptive and inductive.

The qualitative research methodology is used to answer questions about the complex nature of phenomenon mainly with the purpose of describing and understanding the variable from the

participant's experiences, opinion, and point of view. The qualitative study attempts to make sense of or interpret phenomenon in their natural settings (Denzin and Lincoln, 1998).

Holloway and Wheeler (1996), cited in Nieuwenhuis (2007:51), stated that "qualitative research as a research methodology is concerned with understanding the processes and the social and the cultural contexts which underlie various behavioural patterns and is mostly concerned with exploring the "why" questions of research." The qualitative measurement tells us how people feel about a situation or about how things are done or how people behave. Qualitative research typically studies people or systems by interacting with and observing the participants in their natural environment (*in situ*) and focusing on their meanings and interpretations. Qualitative methods aim for a complete, detailed description of observations, including the context of events and circumstances.

Burns (2000: 11) when discussing the qualitative approach, highlights that it "tend(s) to be based on recognition of the importance of the subjective, experiential 'lifeworld' of human beings". Munhall (2001: 67–68, cited in Rolfe, 2006: 306) submits that the "term 'qualitative research' encompasses a variety of designs and methods which have a number of common features such as a holistic approach, a focus on human experience, a sustained contact with people in their natural setting, a high level of researcher involvement and the production of descriptive and/or narrative data".

A qualitative research study thus recognises that relevant reality (in relation to human experience) is a subjective experience, in a certain and specific social context and in a given historical time. Qualitative research methodology is more concerned with uncovering knowledge and understanding how people think and feel about their situation without making any judgement whether those feelings and thoughts are valid or not.

The strength of the qualitative research methodology includes an ability to unearth unexpected and striking information that can further be used to generate theories and opinions. Burns (2000: 13) illustrates this by stating that the "qualitative approaches certainly do not provide easy, quick answers to the complex issues that confront us. But they do offer a viable alternative".

Qualitative research methodology is inductive. In that sense, the researcher is forced to ensure that their own worldviews, experiences and opinion does not get in the way of that of the respondents. It provides in-depth description and understanding of social actors in their social setting. Although qualitative research paradigm is deemed relevant and appropriate in answering the current research study, it is worth noting that there are also limitations associated with this methodology.

Burns (2000: 12) argues that because of the subjectivity and origins of the data collected through qualitative methods, validity and reliability becomes an area of high contestation between the two research paradigms. Rahman (2017:105) argues that some of the shortcomings of qualitative research is that it only focuses on the experiences of participants and completely ignore the imperative issues in the context. Data interpretation and analysis may be more difficult and complex and can take a considerable amount of time. It was the intention of this study to investigate the perceptions and experiences of the targeted respondents, hence this approach is rational.

4.5.3 Mixed Methodology

According to Collins, Onwuegbuzie and Jiao (2007:1); and Creswell and Plano Clark (2007:12) the mixed research methodology approach refers to the combination of both qualitative and quantitative research methodologies into a single study, to provide a complete and better understanding of the research problem. This design combines the strengths of each methodology to answer the research questions (Creswell and Plano Clark, 2011: 5). Bryman (2016: 473) further defines mixed methodology as "the shortcut description of utilization of both quantitative and qualitative research within a single research study". While, Kumar (2014:14) defined mixed methodology as the "utilizes both quantitative and qualitative research and the approach recognizes that specific situations require the qualitative strengths while others dictate quantitative strengths".

These definitions emphases the fact that the mixed methods approach is determined by the type of information required to arrive at the objectives of the study and to answer the research question. Further stipulates that in some cases the study might require both qualitative and quantitative types of data. As discussed in detail above, the research question and objectives of this study requires both types of data to be collected and analysed.

4.5.4 Approach adopted for this Study

This study adopted mixed methodology approach.

Table 3: Methodological Differences

Dimension	Quantitative	Qualitative
Ontology	Singular, research objective	Multiple, subjective realities
Epistemology	Detached observer	Interacting, participating researcher
Research questions	Specified and measurable	Open-ended and ambiguous
Research design	Closed and fixed	Open and iterative
Goals of sampling	Generalizability	Variation and richness for explanatory power
Analytic process	Deductive	Inductive
Cause-effect explanations	Nomothetic, static relationships	Idiographic, emergent and changing patterns
Basis for conclusions	Replicable, numeric data	Naturalistic evidence
Role of values	Value free, neutral	Value laden
Rhetorical style	Impersonal, past tense	Personal, often present tense

Source: Brower (in Stout 2013: 16)

This approach was therefore relevant for this study as it investigates the extent of evidence use in public policy formulation process in the Department of Water and Sanitation which can be effectively measured by using both quantitative and qualitative instruments. Consequently, this process entailed the use of both methodological positions. This approach enabled the study explore opinions, experiences, facts and preferences of individuals involved in the process, through a qualitative approach, and was able to generate quantitative descriptive statistics, which was then used to triangulate the data collected. The use of a mixed method approach allowed the investigation to benefit from the strengths inherent in both quantitative and qualitative methods, while at the same time offsetting the biases associated with each of the methods. The design gave priority and weight to both quantitative and qualitative methods as illustrated in the figure below:

Figure 9: Mixed Method Approach Adopted
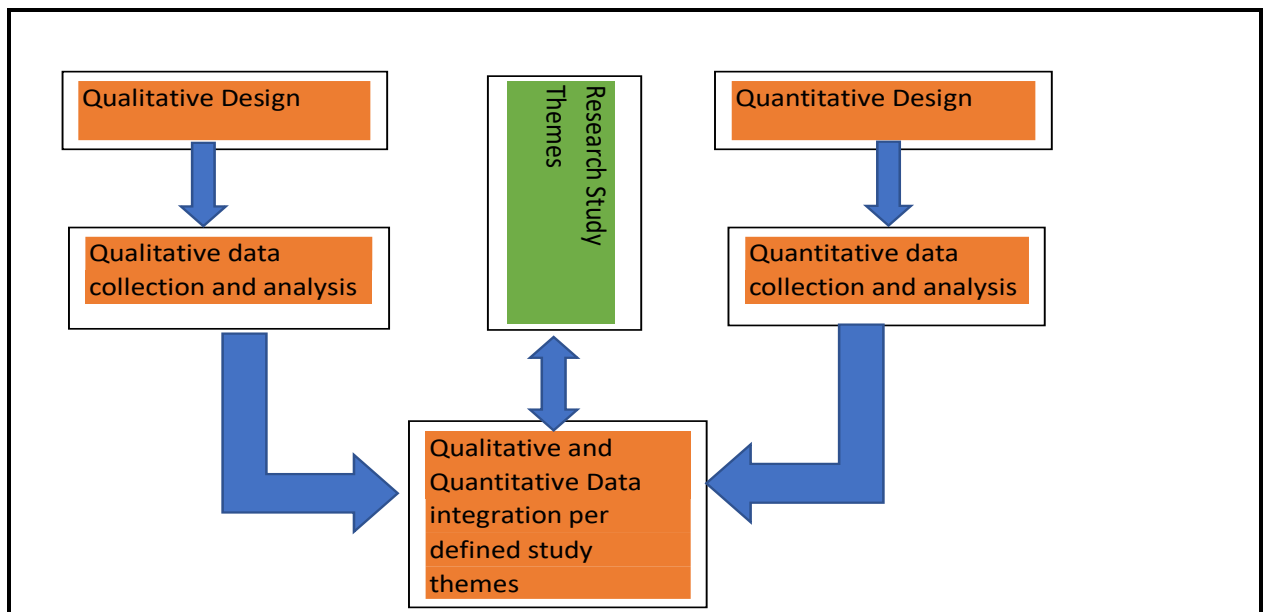
Source: Adapted from Creswell and Plano Clark (2007).

This approach made it possible to compare the different findings for both quantitative and qualitative data collected, and in so doing, allowed the researcher to establish a set of answers which was more reflective of the population under study (Creswell and Plano Clark, 2007).

4.6 RESEARCH DESIGN

According to Maree (2007:70), Bryman (2016:38), Creswell (1994: 146) and Burns (2000: 145) research design is a plan, framework or strategy which moves from an underlying philosophical assumption to specifying the selection of respondents, the data gatherings to be used and the data analysis to be done. It is the plan that guides the arrangement or the conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose.

De Vaus (2001: 9) expands the definition even further when arguing that the research design is more than just a work plan by stating that "the function of a research design is to ensure that the evidence obtained enables us to answer the initial question as unambiguously as possible". For a researcher to successfully answer the research questions and arrive at its objectives, it is important to select an appropriate design based on the research problem and the understanding of the study subject.

In simpler terms, research design can be defined as an overall strategy, approach, plan or process that the researcher chose to utilise in conducting the study in a manner that is logical and relevant to answering the research question(s). This provides a step by step guidance on how each aspect of the study will unfold, including, but not limited to, theories used, data collection, management and analysis, presentation of findings, among other issues. The type of research design is determined by the research problem and questions to be answered. In essence, research design is about the structure of the study.

According to Bryman (2016:38) there are different kinds of research designs, namely: experimental design and its variants, including quasi experiments; cross sectional or survey design; longitudinal design; case study design and comparative design. This study employed descriptive mixed methodology case study research design which is located within the pragmatism research paradigm because of the nature of the research question to be answered, which relates to the participants' experiences, opinions and facts.

4.6.1 Case Study Approach

De Vaus (2001: 2) asserts that "the way in which researchers develop research designs is fundamentally affected by whether the research question is descriptive or explanatory". Explanatory research focuses on the "why" question while descriptive is concerned about the "what" question. The "descriptive research design" is defined as involving an in-depth description of a specific individual, event or group (Babbie and Mouton, 2001:80-81).

Marczyk, DeMatteo and Festinger (2005:149) argues that "case studies…merely describe what occurred, but they cannot tell us why it occurred, and they are likely to involve a great deal of experimenter bias….[because] it involves considerably more interaction between the researcher and the participant than most other research methods". It is for this reason that in this kind of study, "the research design must make enough provision for protection against bias and must maximise reliability" (Kothari, 2004: 37). Therefore, for the case study approach to be effective in research, the researcher needs to ensure that researcher biasness is eliminated, and reliability maximised.

The study used eThekwini Metropolitan Municipality as the Water Services Authority responsible for the implementation of water and sanitation policies, as the case study for this investigation.

4.7   SAMPLING PROCEDURE

4.7.1   Total Population

South Africa has a three-tier government system. It is divided into national, provincial and local government. There are 47 national government departments in South Africa (South African Government 2018). South Africa is subdivided into 9 provinces and one of those provinces is KwaZulu-Natal. The South African Local government system has 278 municipalities that form part of local government. They can be broken down into 8 metropolitan municipalities, 44 District municipalities, and 226 local municipalities. KwaZulu-Natal has a total number of 54 municipalities which comprises of 1 metropolitan, 10 districts and 43 local municipalities.

The study focused on the eThekwini metropolitan Municipality as one of the 152 Water Services Authorities. eThekwini Municipality was chosen because it is one of the 8 metropolitan municipalities (big Water Services Authorities) which presents a unique institutional arrangement of dual governance (coexistence of Traditional Authorities governing through Ingonyama Trust and the Local Government System). Thus, a focus on this municipality offers an opportunity to investigate dynamics which might be relevant to both the urban and rural condition.

Figure 10: Spatial presentation of KwaZulu-Natal Municipalities

Source: SALGA, 2018

In 2019, the total population of eThekwini Water and Sanitation was indicated as 3688 employees. This number was derived from the municipality's database of employees. The sample of **100 employees,** between task grade 14 and 18, was drawn from that population to complete a self-administered questionnaire.

Additionally, it was identified that it would be important to include policy officials from the national Department of Water and Sanitation; executive officials from eThekwini Municipality; officials from the national Department of Cooperative Governance and Traditional Affairs; executives from the Water Research Commission and senior officials from the Pegasys Institute.

Table 4: Total population

eThekwini Water and Sanitation	
Total number of senior managers (task grade 14 to 18)	100
Total number of executives	12
National Department of Water and Sanitation	
Total number of Policy Officials	25
Department of Cooperative Governance and Traditional Affairs	
Total number of Policy Officials	3
Water Research Commission	
Total number of executives	5
Pegasys Institute	
Total number of permanent staff	7

4.7.2 Sample Size

In deciding the sample size, it is important to consider the heterogeneity of the population, the number of selection criteria, multiple samples within one study, the type of data collection methods, budget and other available resources. As a common rule or practice, for qualitative study, "samples for a single study involving individual interviews only often lie under 50. If they become much larger than 50 they start to become difficult to manage in terms of the quality of data collection and analysis that can be achieved" (Ritchie and Lewis, 2003: 84). According to Babbie (2004:78) a small sample of a large population can be more representative than a large sample of a small population.

According to Welman and Kruger and Neuman (cited in Burger and Silima 2006: 666) argues that the size of the population is influenced by the size of the population and its heterogeneity. Ritchie and Lewis (2003: 83) argue that in qualitative research samples are usually small in size. They are small because rarely new evidence usually comes from each additional unit. These positions support by the work of Grinnel and Williams (1990: 127 cited in Burger and

Silima 2006: 666) who argues that a 10% sample is sufficient for sample error control. Stoker (in Burger and Silima 2006: 667) offer a guideline to guide researchers in determining the ideal sample size in survey research, as indicated below.

Table 5: Guidelines for Determining Sample Size

Population Size	Percentage suggested	Number of Respondents
20	100%	20
30	80%	24
50	64%	32
100	45%	45
200	32%	64
500	20%	100
1000	14%	140
10000	4 5%	450
100000	2%	2000
200000	1%	2000

Source: Burger & Silima (2006: 667)

Prior to beginning the data collection process, the municipal organogram indicated that there were **170** employees at task grade 14 to 18 in the Water and Sanitation Department. Upon obtaining Ethical Clearance from UKZN, details from the Human Resource Department of eThekwini Municipality revealed that the total number of employees in these positions totaled **100**. Thus, a total of **100** self-administered questionnaires were sent to potential respondents using *surveyplanet.com* and was met with **72%** response rate. A minimum response rate of 60% would be considered adequate. This complies with the position of Grinnel and Williams (as cited in Burger and Silima 2006: 666)) and Stoker (cited in Burger and Silima 2006: 666).

Table 6: Sample

Institution	Sample size
eThekwini Municipality Survey sample	100
eThekwini Municipality Interview Sample	10
National Department of Water and Sanitation Interviews Sample	5
Department of Cooperative Governance and Traditional Affairs Interviews sample	1
Water Research Commission Interviews sample	2
Pegasys Institute Interviews sample	1

These respondents were considered to have the relevant policy knowledge as they work directly within the policy sections of the institutions identified as key participants in the water services delivery policy making process.

4.8 SAMPLING METHOD AND TECHNIQUE

According to Neuman (1997: 201) sampling is defined as "a process of systematically selecting cases for inclusion in a research project" (also Bless, Higson-Smith, and Kagee 2006: 97). Sampling allows a researcher to use a small subset of cases to generalize about the whole pool of cases. The rationale for sampling is the often near impossibility of using the entire study population due to time and cost constraints (Sarantakos, 2000:139). The use of samples could ensure accessing more accurate information than the use of the whole population because the study will be more manageable and easier to administer instrument for better quality research and research outcomes (De Vos, Strydom, Fouche and Delport, 2011:224). The important issue in sampling is for the researcher to demonstrate, without doubt, the rationale for employing a certain sampling technique and its relevance to the study. There are two types of sampling procedures in social research namely, Probability and Non-probability sampling (Neuman, 1997: 205).

4.8.1 Non-probability Sampling

Non-probability sampling entails that "procedures do not employ the rules of probability theory, do not ensure representativeness, and are mostly used in exploratory research and qualitative analysis" (Sarantakos, 2005:164). Non-probability sampling provides more flexibility in selecting the study sample compared to probability sampling because there is no predetermined methodological selection of respondents before the study commences. Ritchie and Lewis (2003: 78) argue that in a non-probability sample, "the sample is not intended to be statistically representative: the chances of selection for each element are unknown but instead the characteristics of the population are used as the basis of selection". In this method, sample diversity and representivity is not a requirement, and no statistical formula required when this method is employed. The types of non-probability sampling procedures/techniques are accidental or convenience, purposive or judgmental, quota and quota sampling.

4.8.2 Purposive Sampling

Purposive sampling simply means that "participants are selected because of some defining characteristics that make them the holders of the data needed for the study" (Nieuwenhuis, 2007:79). Purposive sampling is a method that allows the researcher to handpick the sample according to the nature of the problem and the phenomenon being studied. This technique allows a researcher to employ the "fit for purpose" discretion in selecting respondents (May, 2002: 95).

In this technique "the researchers purposely choose subjects who, in their opinion, are relevant to the project. The choice of respondents is guided by the judgement of the investigator. For this reason, it is also known as judgmental sampling. There are no particular procedures involved in the actual choice of subjects" (Sarantakos, 2005:164). Neuman (1997: 206) confirms the above assertion by indicating that, researchers used purposive sampling "to select unique cases that are especially informative". This implies that the primary consideration of respondents relies on the researcher's judgement as to who can provide the best information to achieve the objectives of this study.

Irrespective of which method is adopted, Kothari (2004: 57) warns that researchers must be very careful when drawing up a sample. Amongst things to be careful about, is the "systematic bias and sampling error" which are caused by a number of factors such as "inappropriate sampling frame", "defective measuring device", "non-respondents", "indeterminacy principle", "natural bias in the reporting of data". This was considered in determining the optimal sample size and response rates required for valid data. In conducting the investigation, the purposive sampling technique was employed which allowed the researcher to purposefully identify respondents to be included in the study.

4.9 DATA COLLECTION TECHNIQUES

In simple terms, data collection means identifying the relevant sources and sets of information that will be appropriate to answer research question and arrive at the set research objectives. This also involves deciding on tools and techniques of collecting this set of information. Data was collected through the use of self-administered questionnaires and face to face interviews. These methods sought to complete the quantitative and qualitative dimensions of the study respectively.

4.9.1 Data collection using Questionnaires

As part of primary data collection, a self-administered questionnaire was chosen as the appropriate data collection tool. Surveys are generally used to assess views, opinions and feelings. It is based on a set of predetermined set of questions that is being distributed to the sample. Syed Muhammad (2016) argues that there are varieties of ways to administer surveys such as electronic, email, face-to-face and telephonic. Self-administered questionnaire was used as the relevant tool for this study mainly because it provides flexibility for respondents to complete questions at their own pace and time without the presence of the interviewer – this eliminate the interviewer bias.

Closed-ended questions were used in this study because they have a greater precision, uniformity, easier recall for the respondent, easier coding and easier analysis than open-ended questions. Closed-ended questions have a list of possible options listed, from which the respondents must choose, and these responses were pre-coded. This made it easier to collate and analyse data.

Nominal scale of measurement was used to collate and analyse data. This means that the numbers assigned to each response served as tags to categorize or arrange the responses. This type of scale was used because it was the easiest to understand and user to use. The study applied a number-based coding of all questions. This implied that numbers 1 to 5 were used to represent respondent's choices of responses. This type of coding was relevant because nominal scale of measurement was used to collate and analyse data. An example of the survey questionnaire is attached to this report as Appendix E.

4.9.2 Description of the questionnaire

The self-administered questionnaire was sub-divided into five broad areas, in line with the broad questions, objectives and themes. The questionnaire had 45 questions which consisted of both close-ended and open-ended questions. All questions were worded in a simple and unambiguous manner that can be easily understood by all respondents. All the responses were already coded in the survey questions for ease of capturing. There were seven key themes derived from the literature, namely: Contextualization and understanding of public policy making in the Department of Water and Sanitation; Understanding what counts as evidence in

evidence-based policy making; Bridging the gap between research and policy; Evidence integration to policy development and design; Evidence collection for the purpose of policy development and design; Organisational capacity and contribution, and; Evidence-based policy making: The modern approach . These formed the foundation for the questions that were asked.

eThekwini municipality's Water and Sanitation Department's officials at senior management level were identified as target sample for surveying in order to test and collaborate the information emanating from other sources. The example of the survey questionnaire is attached as Appendix E of this dissertation and can be accessed on *surveyplanet* on https://app.surveyplanet.com/questions/5d78ed20b9417319eff1978c.

The questionnaire was divided into the following sections:

Section A – Biographical data

This section has 6 close-ended questions. The questions were aimed at profiling the respondent in terms of their age, gender, educational qualifications, years of service in the water and sanitation department, years of experience in the policy environment, and their level in which they are employed in the department. This was to ensure that the respondents are within the identified task grade 14 to 18.

Section B – Water and sanitation policy making

This section has 12 close-ended questions. These questions were aimed at gauging the respondent's understanding and knowledge of policy process in the water and sanitation sector. To also test their knowledge on evidence and evidence-based based policy making in particular.

Section C – Intergovernmental relations

This section had 6 close-ended questions. The questions were aimed at understanding the nature of engagements and communications between the national Department of Water and Sanitation and eThekwini Municipality Water and Sanitation Department. These engagements relate to policy and any other business.

Section D – Role of eThekwini Municipality in water and sanitation policy development

This section had 9 close-ended and 3 open-ended questions. The intention was to capture the current and future role of eThekwini municipality's Water and Sanitation Department's contribution to national water and sanitation policy development process.

Section E – eThekwini Municipality and Evidence-based policy implementation

This section has 12 close-ended questions. The intention was to gather the views of eThekwini municipality on evidence-based approach to policy making in the water and sanitation sector. A covering letter addressed to the respondents outlined the importance and nature of the study and contained the contact details of the researcher, the supervisor and the University's research office. The covering letter indicated the institutional affiliation of the researcher and was signed by the researcher to ensure the authenticity of the study and facilitate co-operation from the respondents. It was accompanied by the University's ethical clearance certificate and gate keeper's letter signed by the respondent's employer. The respondents were assured that confidentiality and anonymity would be strictly maintained. Instructions were given on how to complete the questionnaire and the link in which the questionnaire can be accessed.

4.9.3 Data collection using Personal Interviews

According to Kothari (2004: 97) "interview method of collecting data involves presentation of oral-verbal stimuli and reply in terms of oral-verbal responses". Although interviews are based on pre-conceived structured or semi-structured questions, "this method of collecting data is usually carried out in a structured way where output depends upon the ability of the interviewer to a large extent" (Kothari, 2004: 17). This study adopted a semi-structured interview technique.

The semi-structured interview is the type of interview that "uses a less-structured approach which sometimes referred to as semi-standardised" (Hall and Hall, 1996: 157). It is commonly used in research projects to corroborate data emerging from other data sources. In this case, data emerging from literature review. It does allow for the probing and clarification of answers. Semi-structured interview schedules basically define the line of inquiry. Semi-structured interviews are usually associated with open-ended questions which allow respondents to express themselves "more freely could with the closed or force-choice questions of the structured questionnaire" (Hall and Hall, 1996: 158).

Like any other technique, semi-structure interview technique has its advantages and disadvantages. Hall and Hall (1996:101) argues that face-to-face interviews allow the interviewer an opportunity to guide the interviewee through the questions, ask probing or follow-up questions and explain any misunderstandings. Face-to-face interviews are viewed as having a higher response rate in compared with other methods because of its ability to provide undiluted focus and building trust between the interviewer and interviewee (Ritchie and Lewis, 2003: 36). In all interviews conducted, clarity seeking questions were always asked by interviewees. Similarly, the interviewer also got an opportunity to ask probing or clarity questions to ensure that the responses provided are understood within the scope of this study. This technique was adopted because its advantages outweighed its disadvantages. And it was deemed relevant because of the level of details it can provide for this study.

In the contrary, Hall and Hall (1996: 102) also caution that interviews "takes a lot of time and requires the full concentration of the interviewer" therefore it might be draining for the interviewer. This puts a limit to the number of interviews that can be conducted a day. Although this is true, but in this study, it was not deemed as a disadvantage because all interviews were recorded and maximum of five interviews were planned and conducted in a day.

The other shortfall, as argued by Hall and Hall (1996: 101) is that respondents can be able to pre-empt the interviewer's expected responses and as a result "provide the answers they think the interviewer wants to hear". Indeed, in some cases respondents managed to answer more than one question at a time but that did not impact negatively on the outcome of the study.
May (2002: 123-124) acknowledges the fact that given its semi-structured nature that gives "a greater degree of latitude" to the respondent it is therefore of crucial importance that the interviews are conducted by researchers themselves given their understanding of both "context and content of the interview". And in this case, all interviews were conducted by the researcher.

4.9.4 Description of Interview Schedule

Interview schedule was sub-divided into 5 sections with a total number of between 3 to 5 questions each section. Five institution-specific interview schedules were designed. They were structured according to the study thematic areas. Each of the five interview schedules was designed in relation to the role of that specific institution in the water and sanitation policy process and sought in-depth understanding and involvement in the policy development process.

All interview questions were open-ended. All the questions were simple, straight forward and easy to understand by all interviewees.

4.9.5 Planning and Conducting Interviews

This study adopted purposive sampling method for interviews. Upon receipt of ethical clearance certificate, the first task was to identify and approach prospective interviewees which were purposefully identified. The identified institutions were contacted via telephone to request for contact details of those individuals, including email addresses. An introductory email accompanied by explanatory letter and ethical clearance certificate was sent to all prospective respondents. Interviews took place in two far apart locations (Pretoria and Durban). It was much easier to secure interviews with Pretoria-based respondents than those that were based in Durban. All Pretoria-based interviews were conducted in a space of 3 consecutive days. The planning process for Pretoria interviews included booking for flights, accommodation and rental car.

In a nutshell, planning included, identifying potential interviewees, preparing interview schedule, contacting the interviewee to arrange date and time for interview, ensuring that all required apparatus is procured e.g. tape recorder. Using interviews as a data collection technique is this study was not only based on the fact that it has a high response rate but also on a fact that they "generally take place at the location of the participant's choosing, in-depth interviews are more accessible to potential participants" (Ritchie and Lewis, 2003: 59). All interviews were conducted in English. Some respondents acknowledged the interviewer's ability to understand other South African languages, therefore, included those in their responses. They all took place at the respondent's offices and during their working hours.

The interviewee's permission to record the entire interview was sought and granted by all interviewees and informed consent form was thereafter signed by respondents prior the interview. Follow-up questions were asked where the information was not clear during the interviews and in instances where respondents gave too brief responses. Similarly, respondents also asked questions for clarity where questions posed to them were not clear.

4.9.6 Accessing Respondents

In order to gain access to potential study respondents representing a specific institution, permission is required (Creswell and Plano Clark, 2007:175). Application for permission is

one of the first steps in gaining trust of the potential participants in the study. Permission was requested and granted from the National Department of Water and Sanitation as well as eThekwini Municipality. Application entailed explaining the purpose of the study and the fact that the study would not cause any harm to the institutions, and that the study will be fully compliant to the research ethics of the University of KwaZulu-Natal.

Permission in a form of formal letters from these institutions was crucial in gaining trust of participants. All the invitation to participants to be part of the study was accompanied by their respective institution's permission letter. It was useful during the actual time of the in-depth interviews; the respondents identified through the sampling procedure were again verbally briefed on the rationale for the study. They were assured of confidentiality and anonymity of whatever information they divulged, as per the informed consent that was both signed by the interviewer and interviewee at the time of the interview.

4.10 QUALITATIVE AND QUANTITATIVE DATA ANALYSIS

The study adopted a theme-based and objective-based approach in collaborating and analysing the data. This meant that the responses were clustered in terms of the themes that were derived from the study objectives as well as document analysis. This will be informed by both content and process analysis outputs. Terre Blanche, Durrheim and Painter (2006: 51) assert that "data are basic material with which researchers work…come from observations…it is essential that the researcher has sound data to analyse and interpret". They also take the argument even further by highlighting the importance of considering and planning for data analysis methods before the data is collected. This is crucial because data analysis is considered as "transforming information (data) into an answer to the original research question" (Terre Blanche, Durrheim and Painter, 2006: 51).

Data analysis is to transform information (data) into an answer to the original research question. Data analysis is the process of bringing order; structure and meaning to mass collect data (De Vos, Strydom, Fouche and Delport, 2011:397). According to Bryman (2012:13) pointed out that data analyses is the stage that is fundamentally about data reduction that is reducing large corpus of information that the researcher has gathered so that s/he can make sense of it.

Data analysis methods can either be qualitative or quantitative in nature based on whether the data to be analysed is qualitative or quantitative. Therefore, a qualitative study can only utilise qualitative data analysis method to analyse collected qualitative data. And the same goes for quantitative data. This view is highlighted by Terre Blanche, Durrheim and Painter (2006: 52) when mentioning that "a qualitative technique begins by identifying themes in the data and relationships between these themes". In this study, theme-based approach was adopted as a qualitative method; however, qualitative arguments in those themes were supported by the quantitative data as well.

The interpretative data analysis was adopted as described by Terre Blanche, Durrheim and Painter, 2006. Interpretative data analysis means, Terre Blanche et al. (2006:321), a "thorough description of the characteristics, process, transitions, and contexts that constitute the phenomenon being studied". Under this kind of qualitative data analysis there are different traditions of analysis that exists such as phenomenology, grounded theory, and thematic content analysis. All of them they follow the five steps of interpretative data analysis i.e. Familiarisation and immersion; inducting themes; coding; elaboration; and, interpretation and checking.

4.10.1 Coding and data processing

Qualitative data analysis commenced by coding of interviewees, data transcription and content analysis and alignment with the predetermined study themes. Holloway and Wheeler (2010:32) suggests that the recorded tapes and transcript are the important tools for the qualitative research, and they must be kept secure all the time and they must be locked in the cabinet so that it will not be reached by anyone. Holloway and Wheeler (2010) further argues that the names of the participants must not be written on the recorded tapes, on the notes as well as on the transcripts. The researcher removed the names of the participants from the transcripts as well as from the recorded tapes and instead used the codes attached to the participants to hide their real identities.

In order to ensure anonymity of participants, coding was employed to each interviewee by a system of combination of letters so that their identities were not revealed and in the dissemination of my research these interviewees remained coded. Data was analysed using theme-based approach and the responded remained coded throughout. The data and research report do not reveal the names, surnames, and or race of respondents.

The process of transcribing also included translating some of the responses from Zulu, Tswana and Pedi to English which is the official language for this study. It was in this stage where text from transcribed data was lifted and pasted under different predetermined thematic areas in order to identify connections, relationships and relevance. This assisted in eliminating the researcher's biasness and ensuring triangulation with quantitative data. The quantitative data processing commenced by capturing data codes that were generated and attached to each response in the survey questionnaire. The rationale for coding was to reduce the data to a manageable and simple form for ease of presentation and analysis (Bryman and Bell, 2011:249).

The coded quantitative data was then collated into the Microsoft Excel spreadsheet and converted into tables, percentages, and then figures. The processed data was presented in overall percentage responses per question. The rationale was for visual descriptive presentation of data for quick and easier analysis and interpretation.

4.11 QUALITATIVE AND QUANTITATIVE DATA INTEGRATION

The study adopted a theme-based approach in collaborating and analysing the data. This meant that the responses were clustered in terms of the predetermined themes that were derived from the study objectives as well as literature review. This was informed by both content and process analysis outputs. The researcher adopted an interpretative thematic content data analysis as described by Terre Blanche, Durrheim and Painter (2006). This type of data analysis assumes that there are different traditions of analysis that exists such as phenomenology, grounded theory, and thematic content analysis. All of them they follow the five steps of interpretative data analysis i.e. Familiarisation and immersion; inducting themes; coding; elaboration; and, interpretation and checking. The information, as indicated above, is presented in the following themes which were determined and outlined in chapter 2 and were derived from the combination of literature review, case studies and study objectives:

- Contextualization and understanding of public policy making in the Department of Water and Sanitation;
- Understanding what counts as evidence in evidence-based policy making;
- Bridging the gap between research and policy;
- Evidence integration to policy development and design;
- Evidence collection for the purpose of policy development and design;

- Organisational capacity and contribution, and;
- Evidence-based policy making: The modern approach.

In the mixed method approach, qualitative data enhances the understanding of value systems, beliefs and experiences of people while the quantitative data makes possible the use of statistical data to establish cause and effect relationships in this study (Kumar, 2011: 104). All the data that was collected by using both the online *surveyplanet* tool and telephonic surveys could not be analysed separately. Both sets of data were consolidated into an Excel spreadsheet in preparation for analysis. The data was consolidated per themes as generated based on study objectives, broad questions and case studies literature review. This is a permissible practice in the mixed method approach social science research as confirmed by Creswell (2009: 208) that "the researcher might collect both quantitative and qualitative data concurrently and integrate or merge the two databases by transforming the qualitative themes into counts and comparing these counts with descriptive quantitative data. In this case, the mixing consists of integrating the two databases by actually merging the quantitative data with the qualitative data".

4.12 CREDIBILITY, VALIDITY AND RELIABILITY

In qualitative research studies, "validity and reliability are achieved when the researcher rigorously follows a number of verification strategies in the course of the research process" (Rolfe, 2006: 305). This implies that 'reliability and validity' are traditional concepts that used to test the process. Rolfe (2006: 305) argues that issues of validity in qualitative studies should be linked not to 'truth' or 'value' as they are for the positivists, but rather to 'trustworthiness', which 'becomes a matter of persuasion whereby the scientist is viewed as having made those practices visible and, therefore, auditable'. This argument suggests that in qualitative research studies, one should go beyond validity and reliability and focus on research rigour. Rigourness of the study relates to the ability to track and verify the research process.

Neuman (1997: 138) argues that reliability and validity are "central issues in all scientific measurement." But acknowledges that in social sciences, reliability and validity are somehow "salient" because subjects in social setting are often "ambiguous, diffuse and not directly observable" (Neuman, 1997). Reliability tells us about the indicator's dependency while validity refers to whether the indicator valid for that specific purpose or definition (Neuman,

1997). Neuman's arguments and definitions become more relevant in the quantitative study context.

This section describes the actions that were taken to investigate a research problem and the rationale for the application of specific procedures or techniques used to identify, select, process, and analyse information applied to understanding the problem, thereby, providing the basis for one to critically assess the validity and reliability. The methodology section answered the two broad questions as they relate to validity and reliability of the findings. Such questions are: How was the data collected? And, how was it analysed? The first question relates to, amongst other things, the manner in which the research was structure/designed, as far as deciding on the kind of data required, the type and size of the sample, the relevance of both the sample and data.

Validity is concerned with two issues, namely, the fact that the instrument being used can measure the phenomenon in question, as well as measuring it accurately (De Vos, Strydom, Fouche and Delport, 2011:173). Validity of study data in this study was ensured during the construction of the survey questionnaire by ensuring that the questions are in simple English, unambiguous, accurate and was easily understood by the respondents. In order to intensify validity and reliability of the study outcome the following was adhered to during questions design and data collection: clear instructions and explanations included in the questionnaire to guide respondents to answer the questions; Respondents were selected based on their expertise and knowledge of the issues involved in the study to ensure trustworthiness and dependability; Each instrument for the study had enough coverage of the research questions; and, All interviews were recorded to ensure accurate capture of evidence and documenting for the analysis.

Rolfe (2006) argues that qualitative research study needs to go beyond reliability and validity and apply qualitative research rigour in order to determine 'trustworthiness' of the study. The term 'rigour' can be traced back from Latin, *rige`re*, meaning 'to be stiff'. In scientific terms means a 'sort of quality control information'. McGregor and Murnane (2010: 421) stipulate that rigour "ensures people using scientific results that some standard of accuracy was employed, meaning any conclusions stemming from an analysis of the results can be trusted to be true".

4.13 ETHICAL CONSIDERATIONS

Ethical guidelines prescribe the acceptable norms, standards and practices which provide standardized professional conduct for researchers (Bless, Higson-Smith and Kagee, 2006:140). Ethics is defined as a set of widely accepted normal principles that offer rules and behavioural expectation of the most correct conduct towards experimental subjects and respondents, employers, sponsors, other research assistance and students (De Vos, 2014:129). According to King and Horrocks (2010:104) pointed out that ethics concern the morality of human conduct. In relation to social research it refers to the moral deliberation choice accountability of on the part of research process. Informed consent was obtained from all participants. Confidentiality is being maintained by keeping discussions and details private. Anonymity was assured by removing all the names of the participants and was replaced by codes instead of their names, positions or titles, which means the research report does not contain any personal information of the participants. Only voluntary participation was encouraged. The researcher explained to the participants that they are not in any form forced to participate in the research study. They were further encouraged to willingly participate and were assured that they were free to withdraw from the study if and when they felt uncomfortable or for whatsoever reason.

4.14 CHAPTER SUMMARY

This chapter presented an account of the research methodology adopted in this study. It provided a detailed discussion on the various social research paradigms and the position adopted by the study. The chapter provided a discussion of qualitative and quantitative research methodologies, and positioned this study as adopting a mixed methodology. The chapter further examined the methods or tools adopted for data collection, namely the self-administered questionnaire and interview. The chapter provided a description of the method adopted for data analysis which includes a statistical analysis of the data collected by way of the self-administered questionnaire, and thematic content analysis of the data collected from the face to face interviews

CHAPTER 5: PRESENTATION AND DISCUSSION OF EMPIRICAL FINDINGS

5.1 INTRODUCTION

The purpose of the study was to investigate the extent in which evidence informs the formulation of water and sanitation policies in order to improve their implementation and achieve universal access to water and sanitation for all. The study interrogates the three key questions, namely: what is the process in place by the Department of Water and Sanitation to use experiential evidence emanating from Water Services Authorities? What is the extent of evidence use currently in policy making at the Department of Water and Sanitation? Is there a need for a new system or amendment to the existing?

This chapter presents the findings in a form of graphs and narration from both survey questionnaire and interviews. This data will be presented and discussed covering six broad emerging themes that were generated from both literature review and study objectives. These themes are:

- Contextualization and understanding of public policy making in the Department of Water and Sanitation - This theme presented the manner in which policy formulation process is understood and contextualised in the water and sanitation sector. This included perspectives from Department of Water and Sanitation, eThekwini Water and Sanitation Department, Water Research Commission and Department of Cooperative Governance and Traditional Affairs;

- Understanding what counts as evidence in evidence-based policy making – this theme entails obtaining the respondent's understanding of what the water and sanitation sector considers as evidence fit for policy making versa-vis what the literature suggest should be considered as relevant policy evidence;

- Bridging the gap between research and policy – this theme acknowledges the existing gap between research and policy making as it emerged from literature review. This theme investigates if this gap really exists in the water and sanitation policy process in South Africa;

- Evidence integration to policy development and design in South Africa – the theme unpacks ways and methods of evidence integration and its applicability in the water and sanitation policy development and design process;

- Evidence collection for the purpose of policy development and design – this theme interrogates the means and ways of collecting evidence in the sector and how evidence is being collected currently;

- Organisational capacity and contribution – this theme assess the roles and responsibilities of mainly two institutions in relation to the policy development and design i.e. Water Services Authority (eThekwini Metropolitan Municipality) and the Department of Water and Sanitation.

In terms of the research approach, this study adopted a mixed method approach (both qualitative and quantitative in nature), by implication, all the methods, paradigms, tools and techniques used are both qualitative and quantitative in nature. In this case, the researcher considered all the assumptions underlying various methods, tools and techniques, as all these are part of methodology. In terms of the qualitative approach, it allowed the researcher to explore opinions, experiences, facts and preferences of individuals involved in the process. The quantitative approach allowed the researcher to develop a deductive opinion of the phenomenon. Quantitative approach helped in validating and testing information emanating from the qualitative data (literature review and interviews), although these two approaches were applied simultaneously.

This chapter will therefore present and discuss both qualitative and quantitative the empirical findings of this study. This chapter will present data emanating from both the interviews and surveys conducted. Qualitative data was collected through **13** interviews with various affected organizations as identified by the researcher. Quantitative data was based on **72** completed self-administered questionnaires by Water and Sanitation Department's officials from the eThekwini Metropolitan Municipality. The findings will be presented and discussed covering the themes outlined above with the intention of making recommendations on a viable evidence-based water and sanitation policy making process model.

5.1.1 THE RESEARCH INSTRUMENT

For qualitative data, this study adopted a semi-structured interview technique to collect qualitative data. A semi-structured interview schedule was designed consisting of open-ended questions. Face-to-face interviews were conducted with 13 key informants. A tape recorder

was used to record the interview proceedings in order to ensure accurate transcribing and analysis of data.

For quantitative data, the electronic self-administered survey questionnaire consisting of 45 close ended questions was designed with five sections. The electronic survey questionnaire was sent out to selected respondent with the link directing them to the survey questions. The response rate to the online request was poor despite several reminders being sent out. Some survey participants opted not to participate in the study for personal reasons that were not shared with the researcher. For those participants, their right not to participate was duly respected and there was no further persuasion thereafter. In order to improve the response rate, the researcher opted for another method, which is, researcher administered telephonic survey. This method was not initially planned for this study. However, upon realising that there is a need to improve the response rate, this method was deemed appropriate. There is an acknowledgement that telephonic interviews can be costly compared to electronic and email survey technique, but its response rate is much higher compared to the two (Syed Muhammad, 2016: 45).

5.1.2 THE SAMPLE AND RESPONSE RATE

Guided by the work of Hall and Hall (1996), Neuman (1997), May (2002), Ritchie and Lewis (2003), Kothari (2004), Sarantakos (2005), Bless, Higson-Smith and Kagee (2006), Kumar (2011), on sampling and sampling procedures, this study adopted purposive technique of non-probability sampling method. This study adopted a mixed methodology approach. This study utilised the purposive sampling technique in the two sampling frames i.e. interview and survey samples.

For the qualitative research method, a total of 20 semi-structured interviews guided by open-ended questions were planned with selected interviewees. For the quantitative research method, 100 self-administered survey questionnaires were sent out to officials at task grade 14 to 18 from eThekwini Water and Sanitation Department. At the end of this study, 72 self-administered survey questionnaires were completed, and 13 face-to-face interviews conducted. This response rate was considered sufficient as it represented a response rate of 72% and 65% for survey and interviews, respectively (Dillman, 1983: 360; Schuman and Presser, 1996: 331; Punch, 2003: 42). A minimum response rate of 60% would be considered adequate. This

complies with the position of Grinnel and Williams (as cited in Burger and Silima, 2006: 666)) and Stoker (cited in Burger and Silima, 2006: 666).

5.2 PRESENTATION AND DISCUSSION OF DATA COLLECTED THROUGH THE INTERVIEW SCHEDULE

5.2.1 FINDINGS FROM INTERVIEWS WITH ETHEKWINI METROPOLITAN MUNICIPALITY

In **Understanding and contextualization of public policy making in the Department of Water and Sanitation,** it is worth noting that respondents from eThekwini Metropolitan Municipality confirmed that they were aware that the Department of Water and Sanitation is responsible for water and sanitation policy and it does engage eThekwini Water and Sanitation Department on new policy matters as part of the general public consultation process. One respondent indicated that "I know that they've got a branch, I would say a department that deals with policy development. And what they do they normally engage with Water Services Authorities when there is a new policy that has developed. They do engagements with municipalities" (AH_WS, 2019).

The respondent from eThekwini Municipality commented "I think it varies per sector, I've been involved in a quite few sectors from the engineering side and I know that, for example, we were instrumental in developing white paper on transport. So we got involved at the ground level. But that was also a function of the fact that we were moving from apartheid to democracy so most officials that were involved in that process were identified and asked to participate. I think it varies again. We do definitely have cases where we respond to something that is gazetted for comments but within each sector it varies and is part of our problem at the moment is that, I'm aware where the technical staff gets involved at an early stage in the formulation of the policy. But I think again, in other areas we tend to get involved only when its gazetted. So again, there's something there that needs to be addressed. I think it will be far better if some of our technical professional got involved earlier rather than later" (CSO, 2019).

This highlighted a general government wide challenge of institutionalising policy formulation process and having a standardised policy formulation process that is understood and implemented by all government departments and at all levels. The standardised process should clearly define roles and responsibilities amongst affected institutions. This will suggest that

both the national Department of Water and Sanitation and Water Services Authorities, in particular, will be familiar with what is expected from them and at what level of policy development process. The Department of Water and Sanitation does not have a standardised policy development framework that guides the policy officials on steps to be followed but rather they rely on their knowledge on what supposed to the policy development process. This was highlighted during the interview when one of the respondents mentioned that "I have to be frank, up to so far we don't have a standardised guidelines but since I've come back to policy unit we have already drafted a draft guideline on policy development that we want to take to top management for consultation and approval which will then have to be universally consulted and adhered to by the department when do policy development going forward. But previously we use to develop policies based on our academic understanding or training but as well draw our guidance from the superiors of the department" (D_P, 2019).

The assumption that local government 'should be' participating in the policy making process without understanding the process of how and when do they participate and what becomes their role during the process, must be dealt with. It emerged from the data collected that the absence of a standard framework for government to government participation process, local government itself acknowledged that it should be participating and acknowledged the importance of their participation. The municipality raised several reasons why it is important for the municipality to participate in the policy development and design process. Reasons ranges from being the policy direction drivers to being implementers with real first-hand experience in service provision to communities. The similar views emerged from the respondents from the Department of Water and Sanitation and Department of Cooperative Governance and Traditional affairs.

In terms of **Evidence integration to policy development and design,** the responses from eThekwini Municipality indicates that there was consensus that evidence is crucial in policy making process and that "there should be other documents to be visited, research alone cannot be used as the only evidence, I think some of the documents they use should be visited" (AH_WS, 2019). And this point was also supported by another respondent when highlighting that "My understanding policies are a law and if the law is not informed then it means that the law is not gonna be enforceable" (PE_WS, 2019).

In relation to **Organisational capacity and contribution,** eThekwini municipality presented mixed opinions on whether the municipality participates or not. Two contradicting responses from AH_WS and PE_WS. This can be linked to the fact that there's no central point that coordinates municipal participation in national policy development in general and its participation and contribution in policy development varies per sector. This was confirmed by the Municipality when pointing out that "at the moment most of it is sector-based, so some sectors submit their comments to council for adoption before they send them on but some sectors don't. they just provide comments. So I think that's the weakness in the system that we need to address moving forward because we should be getting an integrated response from the municipality" (CSO, 2019).

Although participation proved to be limited but there was much confidence on the capacity of the municipality to translate national policies into municipal bylaws and enforcement thereof. This emerged during interview with one of respondents was asked "in your opinion, that the water and sanitation Unit has enough capacity to translate those national policies into bylaws, internal policies? Straight and direct response was "Yes, we do have capacity" (AH_WS, 2019). And the other confirmation from the other interviewee was "Yeah we do have professionals at all levels, and they are well positioned and capable of doing that" (PE_WS, 2019).

eThekwini as a Water Services Authority highlighted several water and sanitation policy implementation challenges. These changes ranges from poorly crafted policies, rigid policies, unable to clearly articulate policies, conflicting policy provisions, etc. This emerged from the respondents when they argued that "implementation is the challenge in itself but the policy is badly crafted, and the policy does not give you the right return on investment then that makes implementation even more difficult. Ok! so implementation has got challenges in itself but poorly crafted policy with poor outcomes, hurry inputs, low impact, has a huge impact in implementation", one respondent said (CSO, 2019).

Another respondent mentioned that "some of the policies are not clearly explained in a way that people can be able to choose which ones they want to enforce more than the others. So in some case that's where the grey line has to be closed. I would say the abuse of policy that is an

issue. I know some policies that say this, and other policies will say that, and you will find that they are conflicting each other" (PE_WS, 2019). Another respondent raises a need to review current policies as they are outdated and not relevant to the current situation.

As another challenge, the respondent mentioned that "these policies are now outdated because of the evolving circumstances. The fact that they have stopped engaging, now we are using….these policies has now become like an Act, because the Act stays, unchanged, but the policies need to be revisited, reviewed according to what is currently happening, so now the impact is that we are using old policies now that meaning we are doing new things will old policies because the dynamics and developments in municipalities now is quite different" (AH_WS, 2019).

There is more determination and willingness to participate in shaping the national policy direction by the municipality should it be provided with more opportunities to do so. One of the respondents from eThekwini municipality indicated that "We would like to participate in the policy development because they are developed for us, nothing for us without us" (AH_WS, 2019).

In so far as the municipal participation and their role in water and sanitation policy development process is concerned, the eThekwini municipality raised two contradicting points. One agreed with the narrative presented by the DWS that the municipalities participates and should be driving the policy space in a form of feedback emanating from implementation. In this point, eThekwini pointed out that "municipalities normally start the process in terms of any policy because my understanding is that the national level cannot function without municipalities which the municipalities will say we want to do ABC&D and they will write a draft and they will send it up" (PE_WS, 2019). To further strengthen this point, the respondent argued that municipalities "should be at the forefront because national government does not use the policies, but they monitor the implementation of those policies so for the municipalities to properly perform, they should be part of the whole process. From the start all the way to the approval because they will be part of the implementation as well and they will be in a better position to advise if there are any changes that are needed in a policy because they will enable the implementation of services to take place" (PE_WS, 2019).

The second point totally highlight the opposite, it exonerated municipality from the entire policy development and design, rather suggested that eThekwini municipality is only a recipient and implementer of policies received from the national Department of Water and Sanitation. The municipality recorded that "In fact we don't participate in the national development of the policies, we get them when they are done, we only participate in implementation… There is no platform that I know where we are called to participate in the new policy development in national" (AH_WS, 2019). It is important to note that interviewees could also not provide any national water or sanitation policy in which they participated in drafting.

The history of participation in policy process from eThekwini metro can be summed as haphazard, messy and below average. This is confirmed by contradicting responses from the municipality itself. This can be linked to the fact that there's no central point that coordinates municipal participation in national policy development in general and its participation and contribution in policy development varies per sector. This was confirmed by the Municipality when pointing out that "at the moment most of it is sector-based, so some sectors submit their comments to council for adoption before they send them on but some sectors don't. they just provide comments. So I think that's the weakness in the system that we need to address moving forward because we should be getting an integrated response from the municipality" (CSO, 2019).

This statement however does not erode the hunger from the municipal technocrats to effectively participate in the process. What is currently negatively affecting their participation are institutional intergovernmental relations issues. This includes blurred channels of interaction between the two spheres. Lack of clear point of entry into the municipality and no policy expert that is internally advising on policy issues within the municipality.

In order to improve the participation and contribution of the municipality, there is a need for communication and interaction to be strengthened. Strengthening and opening channels of communication requires effort from both institutions. eThekwini municipality will require a water and sanitation policy expert that will act as a conduit between the municipality's water and sanitation department and the national Department of Water and Sanitation. In general, a similar practice can be duplicated by other Water Services Authorities for the Department of Water and Sanitation be able to have a database of water and sanitation policy experts that are

stationed at local government level. This database will also assist in ease of circulation of information, building community of practice and peer support mechanism.

Prime to issues raised as policy implementation challenges by the municipality is the issue of poorly crafted policies. Many factors contribute to that, such as, hurried process and hurried inputs. This can be alluded to the lack of participation by the implementing sphere of government, which is local municipalities. The lack of participation also results to poor understanding of policy objectives and interpretation of policy provisions for ease of their translation to implementable actions.

On a question of whether **evidence-based policy making** should be a viable solution for water and sanitation department, most survey respondents from eThekwini Municipality did not know what evidence-based policy making was, but the few that knew felt that "the concept of evidence-based policy making, and data driven policy is extremely important for us" (CSO, 2019).

5.2.2. FINDINGS FROM INTERVIEW WITH NATIONAL DEPARTMENT OF WATER AND SANITATION

Contextualizing and understanding public policy making in the Department of Water and Sanitation: In terms of the existing literature, public policy making process is understood as the process that involves the making of decisions about the direction in which change should occur (Conyers, 1984:15). Dye (2013: 33-34) described public policy making as a political process comprising of series of political activities embedded in each of the following stages: Problem identification, agenda setting, formulation, legitimation, implementation, and evaluation. Further describe those stages as critical in understanding activities involved the public policy making process. There are different stages or phases in public policy making process. Many scholars who study public policy making describes it as multistage process with generally six main stages.

Similar understanding was demonstrated by the interviewees from the Department of Water and Sanitation. This understating was also supported by respondents from other sister institutions. There was further acknowledgement that it is a messy and multi-stakeholder process when one of the respondents from the Department of Water and Sanitation recorded that "The articulation of Government intention on particular matter i.e. Policy which

encompasses a process where all stakeholders consulted (affected or not) to afford them opportunity to add their view on the intended policy." (DD_P, 2019).

Policy making process in the Department of Water and Sanitation has evolved over the years post-1994. In line with the evolution of public policy decision-making in general, the water sector also evolved from the redress and needs based approach in the early 1990s to transformation and human rights-based approach after 2000s. The process of policy development follows the normal conventional 6 steps cyclical model as discussed in chapter 2 and 3. Both the Department of Water and Sanitation and the Department of Cooperative Governance acknowledged that the process is not linear, it can be back and forth and it is not a simple step-by-step process and that is the reason it is impossible to pinpoint exactly the stage in which municipalities get involved.

The literature review indicates that the national Department of Water and Sanitation adopt the conversional policy development framework as discussed in chapter 2. This is confirmed by the current draft policy development protocol by the Department. However, this protocol is modified in a sense that it introduces a new government requirement for departments to undertake what is known as Socio-Economic Assessment System (SEIAS). Socio-Economic Assessment System is a scientific process of ascertaining and assessing the risks associated with policy alternatives or choices and developing mitigation measures to address those risks should they arise during policy implementation (Department of Planning Monitoring and Evaluation, 2015).

Emanating from qualitative empirical data, the Department seems to understand the conventional policy development process and quite acknowledge that it is a messy and multi-stakeholder process when one of the responded recorded that it is the "the articulation of Government intention on particular matter i.e. Policy which encompasses a process where all stakeholders consulted (affected or not) to afford them opportunity to add their view on the intended policy." (DD_P, 2019).

As part of its responsibility, the Department of Water and Sanitation presented a clear acknowledgement that there are number of triggers to policy development in the department. Those triggers included, amongst others: "Manifestos of the ruling party (Government of the day); Courts judgements e.g. Mazibuko case of Prepaid Meters; Ministerial pronouncement

/speeches that direct policy development on particular matter; Legislations gaps and outdated policies; Monitoring and evaluation /Implementation reports; and, Regulatory Reports e.g. Blue Green Drop reports" (DD_P, 2019).

Emanating from the responses, it appeared that all the respondents had hands on experience in policy development at different capacities. When they were asked to name one policy that each respondent was involved in developing and briefly outline what was their role in the process. One respondent indicated that "it has to be National Sanitation Policy that was approved by cabinet in 2016. I was tasked to oversee the development of the policy. So I led this process from the inception up until close to approval and I had to hand it over to the policy Unit for taking it back to approval but for, so it was left with close to 5% or even less than that" (D_P, 2019). Whilst the other respondent indicated that it is the "National Sanitation Policy (2016), my role includes the following: Participated in the drafting team to guide the drafters of policy in relation to alignment e.g. appropriate technology issues in relation to Sanitation; Presenting the draft policy during public and stakeholders consultation process on various platforms; Recording of comment during consultation period; and, Consolidating, synthesising and analysing of comments received" (DD_P, 2019).

If the Department of Water and Sanitation is serious about turning the tide and do things differently, it must recognize and embrace the role of the Water Research Commission in the policy development process. It proved to be one of the critical stakeholders in terms of providing the much-needed evidence for policy decision making by the Department of Water and Sanitation. It was also noted that the Water Research Commission 'occasionally' participated in policy development in the Department of Water and Sanitation. This is either by inclusion in task teams/think tanks; responding to specific requests for information from DWS; comment on draft policy gazetted for public comment; and, participating in stakeholder engagement hearings.

This working relationship needs to be enhanced and formalised in a sense that there should be a standard policy team comprises of officials from the Department of Water and Sanitation and Water Research Commission. This will ensure a proactive and continuous involvement of the WRC in every policy development in the department. By so doing, the Department of Water and Sanitation will be able to implement 3 out of 4 strategies of bridging the gap between

research, policy and practice as proposed by Uzochukwu, Onwujekwe, Mbachu, Okwuosa, Etiaba, Nyström and Gilson (2016:2).

Given the complex institutional arrangements in the water and sanitation value chain, the Department of Water and Sanitation as the lead department in the sector must invest in developing a clear standard stakeholder engagement framework in order to ensure the involvement of all relevant stakeholders in the sector. The framework must be developed in consultation with the sector stakeholder in order to enable a clear definition of roles and responsibilities in the process. As part of their main responsibility, stakeholders will be enriching the policy process with much needed and required evidence in order to make more informed policy decisions. In terms of the local government involvement, benefits also include ease of implementation if the implementers (Water Services Authorities) were also part of the entire policy development process.

In defining **what count as evidence in evidence-based policy making,** the Department of Water and Sanitation respondents acknowledged the importance of evidence and that, it varies in typology. Although there are commonalities in a way evidence is understood within the department but there's no consensus on the exact definition. This also emerged during literature review. Respondents indicated that evidence, for purposes of water and sanitation policy development ranges from site visits, research reports, conducting case studies and evaluation research.

Based on consulted literature, and within the context of evidence-based policy making, there is no consensus in the academic fraternity on a common definition of evidence. Others argues that evidence can only be generated through scientific research and systematic reviews (Banks, 2009; Head, 2015; Hammersley, 2005). This definition falls short because it disregards other types of evidence such as existing knowledge, experiences, values and beliefs, etc. (Punton, Hagerman, Brown, Echt, Fisher, Lloyd, Morton and Vogel, 2016). The Oxford dictionary provides a generic simple definition if what is evidence. It refers to evidence as "information indicating whether something is true or valid…information used to establish facts in a legal investigation or to support a case in a law court" (Oxford dictionary, 2003: 305). Simply put, evidence is information or data that supports, or rejects, a certain position. Definition of what counts as evidence is dependent on the researcher's assumptions and school of thought (Bouffard and Reid, 2012: 6). For example, pragmatists believe on what works as evidence not

how it works, whilst realists argue that "we have no evidence until we have a credible explanatory theory" (Bouffard and Reid, 2012: 6).

In view of the above literature, in this study, evidence is understood based on a description provided by Marais and Matebesi (2012) when assessing the level of evidence-based decision making in respect of the development of Provincial Growth and Development Strategies (PGDSs) in South Africa. Marais and Matebesi (2012) view evidence as 'official statistical data', 'official government policies', 'government research outputs', and 'scientific research from universities and non-governmental organisations.' In this study, evidence is inclusive of expert knowledge, stakeholder consultation, previous evaluations, published research, values and beliefs (Punton, Hagerman, Brown, Echt, Fisher, Lloyd, Morton and Vogel, 2016).

The Department of Water and Sanitation respondents acknowledges the importance of evidence and that it varies in typology. Although there are commonalities in a way evidence is understood within the department but there's no consensus on the exact definition. This also emerged during literature review. Punton, Hagerman, Brown, Echt, Fisher, Lloyd, Morton and Vogel (2016) asserts that evidence varies, and context specific. What is deemed appropriate in a given context, should be regarded as evidence (Punton, Hagerman, Brown, Echt, Fisher, Lloyd, Morton and Vogel, 2016: 17). On the contrary, Head (2015) advocates for the use of scientific systematic reviews to determine what can be regarded as evidence. Based on these arguments, there is no common definition of what is regarded as evidence. Therefore, evidence can be defined differently based on the discipline and context in which it is applied. Respondents indicated that evidence, for purposes of water and sanitation policy development ranges from site visits, research reports, conducting case studies and evaluation research.

Evidence integration to policy development and design, respondents from the national Department of Water and Sanitation presented clear consensus on the importance of evidence in policy making process. They state reasons such as "if you have evidence, or your policies are informed by evidence, then it becomes easier for them to be implemented but without evidence it becomes a meiotic diagnosis of the problem" (ASD_P, 2019).

Evidence-based policy making should not be viewed as a mere staged process rather as one of the determinants that influences the policy outcomes. Freiberg and Carson (2010: 155) dismisses the rational view of evidence integration into policy as a linear process instead

recognize that evidence can be ahead of policy making or evidence can be generated while developing the policy and assist to meld it.

Newman (2018: 1109) argues that there is no need to continue convincing policy makers to use evidence by asserting that "If evidence is good for policy—that is, if it is true that more and better evidence, applied correctly, will improve policy outcomes and ultimately improve people's lives—then policy-makers should be the ones to ensure that policy is based on evidence".

The evidence further points to the fact that government officials or policy makers often dismiss or regards scientific academic research findings as irrelevant based on scientific methods and theories not reality. This emerges from Marais and Matebesi (2012: 366) as one of their respondent's asserts that "many academics fail to move beyond theory and unfortunately government is guided by evidence, which is measurable and practically feasible to implement". There is a need to ensure that research output is not only scientifically sound, rather also make recommendations that are easy to understand and translatable into implementable actions.

The evolution towards a more evidence-based policy and decision making is becoming more and more robust owed to the modernist world view. The main underlying assumption of the advocates of evidence-based policy is that, the more evidence you have makes it more likely and easy for all the actors in the policy process to find each other and reach more rational policy decision. Punton, Hagerman, Brown, Echt, Fisher, Lloyd, Morton and Vogel (2016: 20) supports this assumption by arguing that the "quality criteria also often refer to the 'size of the evidence base', underpinned by the assumption that studies can be 'added up' to generate more reliable findings".

The consulted literature indicated that there is no common definition of what is regarded as evidence as it is used in various disciplines, but it is context-based (DPME, 2012). For purposes of the context of this study, evidence was understood as 'official statistical data', 'official government policies', 'government research outputs', and 'scientific research from institutions and non-governmental organisations'. It emerged from literature that evidence-based policy making is the process that includes a set of systematic methods of integrating evidence in policy making. It is more concerned about the policy development process and procedures followed that the actual policy output (Davis, 2004; Sutcliffe and Court, 2005; Freiberg and Carson,

2010). Cronin and Sadan (2015) argued that evidence-based policy making process suggests that evidence is an integral part of every step of public policy formulation process. It is therefore important to understand what is meant by evidence in the context of policy formulation and how evidence can be integrated.

Some of the challenges faced by policymakers in implementing evidence-based policy making related to the lack of consensus on evidence-based process, what constitutes evidence, selective use of evidence, political influence on evidence, whether monitoring and evaluation can provide enough evidence, researches not conducted only to inform policy decisions (Marais and Matebesi 2012). Marais and Matebesi (2012: 362) concluded that there is an acknowledgement that research is still playing a minimal role in policy development in South Africa.

From the Department of Water and Sanitation perspective, evidence is defined as consisting of site visits, research reports, case studies and evaluation studies. Findings indicated that there is consensus amongst respondents on the importance of evidence in public policy making for improved implementation and service delivery. This emerged from both literature and fieldwork data. The point of contestation is around how and where evidence must be used. Other arguments suggest that evidence is crucial at specific stages of policy development whereas others argue that evidence must be used throughout the policy process. This study subscribed to the latter argument in relation to the use and importance of evidence. This was informed by the view that policy making process is a cyclical and messy process that is not clear and simple step-by-step process. New and crucial evidence can emerge and important at any stage of the policy development process (Ile, Eresia-Eke and Allen-Ile, 2012; Howlett and Mukherjee, 2017).

There is clear consensus on the importance of evidence in policy making process amongst respondents. They stated reasons such as "if you have evidence, or your policies are informed by evidence, then it becomes easier for them to be implemented but without evidence it becomes a meiotic diagnosis of the problem" (ASD_P, 2019).

This position is also echoed by the other respondent when indicating that it "assist us crafting responsive policy positions...if there is enough evidence that is presented to policy makers then the work might be a little bit easier to respond accordingly because its specific and the evidence

is there or the information is there" (D_P, 2019). And a more precise response and closer to what the literature articulates as the main reason why evidence is important in policy making, one respondent reasoned that it "aid predictable degree of certainty of what works and what doesn't" (DD_P, 2019).

All respondents anonymously pointed to the fact that it is critical that when you commence the policy process, you start with collecting evidence, facts and information about the problem. When they were asked a question about which stage of policy making process should evidence be used? Most respondents indicated that at the agenda setting and problem identification stages so that the policy directly responds to the problem. However, there was one differing view from one of the respondents from the Department of Water and Sanitation that tends to acknowledge the importance of evidence integration in all stages of policy development process.

The respondent highlighted that evidence should be considered "Throughout the policy making process and more attention should be paid in the beginning of the process where decision to have to be made. The use of evidence throughout will also assist to validate or to contradict the initial evidence or aggregate the evidence to an acceptable level of evidence" (DD_P, 2019). This concurs with the argument raised by Paine Cronin and Sadan (2015) and used a conventional policy making process to illustrate what kind of evidence is required at each stage.

In relation to **Evidence collection for purposes of policy development and design,** all respondents concur that it is indeed a responsibility of the Department of Water and Sanitation to ensure that municipalities which are Water Services Authorities participates in the policy development process. Amongst the reasons stated includes the fact that the involvement of Water Services Authorities helps build capacity and improves implementation. It acknowledges Water Services Authorities as critical in terms of implanting policies and for them to successfully undertake that responsibility, they must be afforded an opportunity to be part of decision-making process.

One of the respondents from the Department of Water and Sanitation narrated that point by highlighting that "It is responsibility of the department to ensure participation of everyone, every stakeholder and every other government department, entities, Non-Governmental Organization, General public including Water Services Authorities. Also, it is responsibility of

Water Services Authorities to participate in policy making process as this is their inherent mandate which is embedded in ensuring the provide water services in their Ares of jurisdiction. For successful execution of their mandate this demand that Water Services Authorities acquit themselves with the water services policies that required to be implemented by them" (DD_P, 2019). When asked about the department's main source of evidence, respondents from the Department of Water and Sanitation made reference to research only. The Department of Water and Sanitation have, under its portfolio, the Water Research Commission, which is responsible for water and sanitation research, which was, in the main, highlighted as the main source.

There are two opposing views in relation to the current public policy making practice in the Department of Water and Sanitation. One is that, the Department itself is of the view that it does use evidence in its policy decision making process as it conducts the so-called Socio-Economic Impact Assessment as approved means of consulting evidence.

In this regard, the Department of Water and Sanitation can source information and knowledge for policy development and design purpose from the Water Research Commission. The WRC already has a very rich body of knowledge and information generated over the years and which is also being generated. The Department must also commission its own policy evaluation studies that provide insight on the overall performance of a particular policy and this is regarded as crucial and important feedback that needs to be considered when deciding on whether the policy has or is delivering on its set objectives.

Equally important is the collection of the feedback from the implementers themselves. In this case, the role of Water Services Authorities to actively provide continuous policy implementation updates and any other matters relating to policy implementation becomes non-negotiable. In this way, the Department of Water and Sanitation will have enough evidence to synthesis and inform policy decisions.

In assessing the **Organisational capacity and contribution,** the responses from the Department of Water and Sanitation on the involvement of municipalities in national policy development process suggested that the department has ongoing engagements with municipalities on matters of policy and beyond. With regards to engagements at the policy level, one of the respondents indicated that "We involve them [municipalities] through the identification of the problem that need to be addressed because policies are implemented at the

municipal level. So they are the ones that drives policy direction. Let's say they want to do something and there is no policy that informs the direction that they want to take" (ASD_P, 2019). It is also through their participation in other water and sanitation forums as indicated by DD_P (2019) when stating that "in water and sanitation forum to discuss issue pertaining to water resources management and water services delivery to inform future policy development" (DD_P, 2019).

Although there's agreement amongst the respondents that the municipalities are involved but there are contrasting views on how they are involved and at what stage. On a sharp contrast, the DD_S (2019) indicated that "The stages will be, will not be at the conceptual phase of the process but at the advanced stage where a draft would have been developed by the department and then consultation on that draft to make input on that particular, so I think that's when we normally involve them" (DD_S, 2019). And again, it emerged that municipalities seems to participate in more than one form. This was raised by both the DWS and COGTA. D_P (2019) stated that "in our policy development, at any early stage, we engage with municipalities. Its either through COGTA, SALGA as well as going out" (D_P, 2019).

It appears that municipal participation is mapped out through the stakeholder analysis. Stakeholder analysis is the process of systematically gathering and analyzing qualitative information to determine whose interests should be taken into account when developing and/or implementing a policy or programme. The DWS confirmed that as part of the policy development process, stakeholder analysis is also undertaken. One of the respondents mentioned that "this is done in order to target specific and critical stakeholder's base on the policy to afford a meaningful participation and to aid successful implementation of the policy" (DD_P, 2019). And this assertion was also confirmed by another respondent from the Department of Water and Sanitation by emphasizing that "I have already indicated or there is now, since 2015, a SEIAS [Socio-Economic Impact Assessment System] process where it identifies who are the affected parties or who are the beneficiaries, that's where also the guidance be seeked (sought) when we should engage municipalities" (D_P, 2019).

The role of municipalities, as defined by the Department of Water and Sanitation, emanates from the Water Services Act, and they are defined as critical stakeholder in policy however their role is to provide inputs and comments as one of the respondents simple put "Normally the role that they play is to provide inputs and make comments" (DD_S, 2019). This sentiment

was also supplemented by another respondent from the Department of Water and Sanitation when mentioning that "any policy position that we come up with, at the end of the day it will be the municipalities as the service providers down the line who will implement. We don't implement policies at the national level. That's how the decision come to be that those guys are the implementers, so they are the critical part of any policy formulation or policy processes, and they are the main stakeholders" (ASD_P, 2019).

The literature on evidence-based policy making approach in South African government in the previous chapter indicated that there are government wide interventions that are currently being introduced dating back from 2015, to date. Amongst them, includes institutionalizing evidence-based approach in government departments as well as building partnerships with other institutions and building capacity amongst and between policy practitioners in government. It was for this research that the Department of Water and Sanitation was abreast the concept. There was an indication that all of them they have been involved in formal or informal training on evidence-based policy making.

Although no details were provided by respondents in terms of demonstrating their level of understanding of the concept, however they were content that this should be the way to go. One respondent said, "all of us should embrace to assist us to make calculated predictions about our intentions through policies" (DD_P, 2019). The other respondent gave a more detailed narration that "It should be a standard, everyone or every department, every government sphere should implement this thing of evidence based or evidence informed decision making because we don't want to haul or address a problem based on political statements because that's what we have seen lately that if a minister say something then we draft a policy and say to address 1,2,3 our policies should be based on evidence so that they are implementable. South Africa is being hailed as having good policies but lack implementation. So we should ask questions as to whether they were based on evidence or was just an inspiration" (ASD_P, 2019).

It is also noticeable that the national Department of Water and Sanitation has, like other government departments, recognized the need to change the manner in which its policies are formulated. Part of this is to institutionalize the policy making process within the Department itself by developing a policy making framework or procedures that can be understood by all in the department. Secondly, the move from opinion-based approach to evidence-based approach

to policy making process. This emerged when the department incorporated the SEIAS as its element of evidence aspect in policy.

5.2.3. FINDINGS FROM INTERVIEW WITH WATER RESEARCH COMMISSION

Contextualizing and understanding public policy making in the Department of Water and Sanitation: The Water Research Commission is the institution that falls under the water and sanitation department's portfolio. It was established in terms of Water Research Act 34 of 1971 with the mandate to provide research and knowledge generation in the sector. This was confirmed during data collection when one of the respondents from Water Research Commission explained that "WRC by its mandate was established to provide solutions and knowledge for the water sector. And it's very important to understand that role because what it meant is that, do research and whatever activities that will result in knowledge being generated and solutions being found for the water sector" (WRC_MM, 2019). This institution is the research engine for the sector as it develops and direct the research agenda by identifying research needs and funding research in the sector (Water Research Commission Annual report 2018/2019).

The WRC further confirmed that, it participates in policy making at the Department of Water and Sanitation, either indirectly or directly. In terms of the direct participation, the "WRC occasionally participates directly through inclusion in task teams/think tanks set up by DWS to draft policy, as well as responding to specific requests for information from DWS. WRC will also, when relevant, comment on draft policy gazetted for public comment and participate in stakeholder engagement hearings. As part of the commenting process, research managers extract and synthesise relevant knowledge generated by WRC into specific inputs that address the policy issues" (WRC_JD, 2019).

The Water Research Commission's understanding of public policy making in the Department of Water and Sanitation was summarised by one respondent as "Policy making is messy. It is as much as a political as technical process, involving mediation between sometimes widely diverging interests. Value choices still need to be made" (WRC_JD, 2019).

In defining **what count as evidence in evidence-based policy making,** the WRC suggested that all its work is evidence for the water and sanitation sector. The WRC provides three kinds

of information to the department after every WRC funded research is finalised. This was articulated by one of the respondents when pointing out that "out of our research, this is what we do – we inform the minister, we inform policy and we inform practice. Those three" (WRC_MM, 2019).

Key as a source of scientific research and systematic reviews evidence, is the Water Research Commission as mandated by the Water Research Act, 34 of 1971. This was confirmed during the interview with one of the WRC respondents by highlighting that "WRC by its mandate was established to provide solutions and knowledge for the water sector. And it's very important to understand that role because what it meant is that, do research and whatever activities that will result in knowledge being generated and solutions being found for the water sector" (WRC_MM, 2019).

Furthermore, the Water Research Commission's 20 years review report mentioned that "the WRC have been of importance to our sector [water and sanitation], providing the scientific basis for the development of new policies and strategies as well as process- and product-directed technologies" (Water Research Commission, 2014: 1-3). The WRC itself confirmed during interview that it provides three kinds of information to the Department of Water and Sanitation, specifically, after every WRC funded research is finalised "we inform the minister, we inform policy and we inform practice. Those three" through Ministerial briefs, Policy briefs and Technical briefs (WRC_MM, 2019).

With the acknowledgement of the existing **gap between research and policy and the need to bridge it,** the WRC as the knowledge and information generation and dissemination hub for the sector, indicated that it has its role to play in terms of making the information available for policy makers to consider when developing policies. Although the institution could not quantify the number of policies developed using its research output but when it comes to the question of whether the DWS uses its output for policy development, one of the respondents indicated that "we not determining as such, we don't have a final say whether this should be used in the policy or not but we can do the ground work to make sure that the policy makers are fully conversant on the issues and if they so wish they can easily take it up" (WRC_MM, 2019).

In addition, the WRC emphasised on the importance partnerships between DWS and its entities and gains that can be derived from these partnerships. The DWS can draw a lot of expertise from such entities that will help enrich the policy development capacity in the department. These engagements are "better than simply having a policy brief to read. You cannot have a conversation with a policy brief. If there were more trust between DWS and its entities and the larger community of practice, the intellectual capital that DWS would be able to draw on would be immense" (WRC_JD, 2019).

It is quite important to acknowledge upfront that scientific research output is just one factor in policy development process. There are other factors that also contribute in shaping the policy outcomes (Marais and Matebesi, 2012). Freiberg and Carson (2010: 156) acknowledges that "the relationships between research, knowledge, policy and practice are always likely to remain loose, shifting and contingent". Having acknowledged the above, Marais and Matebesi (2012) still suggest that there is still a possibility to harmonise these into a seamless implementable process by identifying five areas that requires special attention and consensus amongst 'stakeholders within given service area'. These areas include, firstly, the acknowledgement and admission that research findings are not everything in policy development process but just one factor that contributes to the whole process. Secondly, that the same research findings or evidence can be used by different role players differently in the policy development process, depending on their interests. Thirdly, consensus on what constitutes evidence in the given field and how it will be used in the policy development process. Fourthly, it appears that research is still supply driven, so there is a need to change into a demand driven kind of research. And lastly, evidence suggests that longitudinal multi-disciplinary scientific researches prove to stand a better chance in influencing policy output (Marais and Matebesi, 2012: 360-361).

Hammersley (2005) argued that research and policy are viewed as two separate worlds. Uzochukwu et al. (2016) acknowledged the existence of the gap between the research world and the world of policy as argued by Hammersley (2005). Uzochukwu et al. (2016: 2) submits that the gap between research and policy is much wider in low and middle-income countries. And they conclude that, it is because there is a lack of understating of benefits and opportunities associated with collaboration between the two worlds.

The Water Research Commission as the research and information hub for the sector, indicated that it has a much bigger role to play in terms of making the information and evidence available

for policy makers to consider when developing policies. Although the institution could not quantitatively indicate the number of policies developed using its research output but when it comes to the question of whether the Department of Water and Sanitation uses its output for policy development, the WRC indicated that "we not determining as such, we don't have a final say whether this should be used in the policy or not but we can do the ground work to make sure that the policy makers are fully conversant on the issues and if they so wish they can easily take it up" (WRC_MM, 2019).

In addition, the Water Research Commission emphasised on the importance of partnerships between the Department of Water and Sanitation and its entities and gains that can be derived from these partnerships. The DWS can draw a lot of expertise from these entities that will help enrich the policy development capacity in the department. These engagements are "better than simply having a policy brief to read. You cannot have a conversation with a policy brief. If there were more trust between DWS and its entities and the larger community of practice, the intellectual capital that DWS would be able to draw on would be immense" (WRC_JD, 2019). This assertion supports the view by Uzochukwu et al. (2016: 2) when concluding that the gap between research and policy is wider in low income countries because "there is a lack of understating of benefits and opportunities associated with collaboration between the two worlds".

Although scientific evidence is only one lens used by policy-makers to support their decisions (Young, Gropp, Pintar, Waddell, Marshall, Thomas, McEwen, and Raji, 2014) but the gap between research and policy remains loose and wide (Marais and Matebesi, 2012; Freiberg and Carson, 2010; Hammersley, 2005). In order to bridge this gap, Uzochukwu et al. (2016) proposes the following strategies: 1) policymakers and donors seeking evidence from researchers where stakeholders request evidence on implementation/scaling up; 2) involving stakeholders in designing objectives of a research and throughout the research period: 3) facilitating policy maker-researcher engagement in best ways of using research findings to influence policy and practice; 4) active dissemination of research findings to relevant stakeholders and policymakers.

Marais and Matebesi (2012) argues that research is still playing a minimal role in policy development in South Africa. Additionally, Marais and Matebesi (2012) submitted that this is due to "the fact that the goals of policy makers are complex and mostly difficult to test; research

is easily labelled as irrelevant; there is seldom consensus in respect of research; there is commonly a range of competing evidence or the existing knowledge is of poor quality" (Marais and Matebesi, 2012: 362). In bridging this gap, Marais and Matebesi (2012) recommend that there is a need to understand that policy can be informed by evidence that emanates from 1) policy-maker initiated empirical research, 2) researcher initiated empirical research, and 3) problem-specific past interventions. There is a need for a researcher-policymaker interface.

In relation to **Evidence integration to policy development and design** by the Department of Water and Sanitation, the WRC presented the view that "At times DWS is highly responsive to emerging issues/challenges identified through research and other times where the uptake is slow or non-existent…There are good examples of where policy positions are rooted in solid scientific recommendations (e.g. incorporation of the concept of Strategic Water Source Areas into the 2nd National Water Resource Strategy) and examples of where there appears to be no clear rationale for positions adopted" (WRC_JD, 2019).

In evidence-based policy making, policy makers need to consider the 'scenario planning' when making policy decisions which includes commissioning new research and consulting relevant experts, as well as evaluating the outcomes (Howlett and Mukherjee, 2017: 506). They further argue that evidence-based policy making should be able to "systematically match every stage of policy making process with a specific form of evidence in order to make that policy fully effective" (Howlett and Mukherjee, 2017: 506).

In addition to this view, WRC_JD (2019) indicated that " At times DWS is highly responsive to emerging issues/challenges identified through research and other times where the uptake is slow or non-existent…There are good examples of where policy positions are rooted in solid scientific recommendations (e.g. incorporation of the concept of Strategic Water Source Areas into the 2nd National Water Resource Strategy) and examples of where there appears to be no clear rationale for positions adopted" (WRC_JD, 2019).

In as far as **evidence collection for the purpose of policy development and design** is concerned, the Water Research Commission confirmed that it is not directly involved in the policy development process in the Department of Water and Sanitation, however it only contributes by generation policy related knowledge and information. Respondent highlighted that "we not involved at all…if there's research that comes up with something that has a

potential on policy or change of thinking or practice, we then prepare what we call Ministerial briefs or policy briefs, there also technical briefs" (WRC_MM, 2019). The intention of the policy briefs as understood by the WRC as to highlight the areas of policy and legislative concerns that emerges from research which might require a review of policy or development of new policy.

The water and sanitation sector present a unique configuration in the South African government system in that it does not have a provincial water and sanitation department and it has a statutory research institution that acts as an information and knowledge hub for the sector. There are different types of evidence that must be considered in the policy development cycle in water and sanitation that is crucial for policy development and design.

The statutory institution called the Water Research Commission that is responsible for coordinating, commissioning and supporting the scientific research area in the water and sanitation sector. The WRC plays a critical role in terms of generating and disseminating both technical and policy information and knowledge in the sector. And this is always available for use by the national Department of Water and Sanitation for decision making on water and sanitation matters, whether on policy, legislation and/or practice levels.

The Water Research Commission's approach to providing research support to the department believed that it contributes positively in making better policies and better policies are measured by its implementation successes. When asked whether this approach improves policy implementation and results, WRC_MM (2019) responded by saying "obviously, what will happen is that, the policy will allow for better practice and better way of doing things. The policy opens a room for that. And what is interesting when it comes to research, immediately you have a new policy and you applying that policy, you do research to follow on the impact of that policy whether is giving you the results that we expect, if not, then we inform the research and say this policy doesn't give us the results that we expected and then there will be policy improvement".

With a similar and detailed view, the WRC suggested that "if evidence use during policy making helps to produce policies that are responsive to the core issues, that articulate the problem accurately and identify responses that are appropriate to the problem, then the implementation outcomes are likely to be better than those from misaligned, incoherent policies

that do not properly match problems and solutions" (WRC_JD, 2019). These views are in full agreement with the views expressed by the Department of Water and Sanitation.

In addition, the WRC expressed the need to change the current policy development process in the Department of Water and Sanitation which talks to the policy maker's attitudes which in turn has negative implications on several important policy elements. One element is, policy makers tends to overlook scientific policy relevant information because they feel insecure or threatened by the amount of evidence and expertise from the research commission. And secondly, this also affect the way the WRC, as a strategic policy stakeholder, participates in shaping water and sanitation policies. This was clearly narrated by one of the respondents from Water Research Commission when stating that "Some individuals with fragile egos in DWS fail to understand that policy advice, in the form of policy briefs emanating from research projects commissioned by WRC, does not usurp the policy making role of the department. This insecurity is troubling, as it easily leads to rich sources of policy-relevant knowledge/evidence being ignored or discounted. If officials in the department were more secure in their roles and confident of their ability to scrutinise policy-relevant evidence, there would be more potential for DWS to involve relevant experts in the drafting stage, rather than these experts only being able to engage in the public participation stage along with everyone else…The earlier in the process substantive inputs can be made, the better. Currently this is not happening. Policy drafting is largely a closed shop within DWS. Their understanding of what it means to be a policy maker is very narrow" (WRC_JD, 2019).

On a similar vein, the WRC concurred with the DWS's views that evidence based policy making should be the way to go as the other respondent deposited "I completely agree that evidence should be a component of any policy making process, but we should not try to over-technicise policy-making by pretending it is foremost a technical process revolving around the rational identification and selection of options" (WRC_JD, 2019).

5.2.4. FINDINGS FROM INTERVIEW WITH NATIONAL DEPARTMENT COOPERATIVE GOVERNANCE AND TRADITIONAL AFFAIRS

In **contextualizing and understanding public policy making in the Department of Water and Sanitation,** the Department of Cooperative Governance and Traditional Affairs defined its role as that of ensuring that the interests of local government are taken care of should any

department review their policies that has a bearing on local government. And secondly, indicated that it is also in the interest of any national department to ensure the involvement of the so-called sister departments in policy development in order to secure the buy in and support.

Further emphasis was drawn to the involvement of South African Local Government Association in matters impacting on municipalities and highlights its influence and authority the Association has on municipalities. The Department of Cooperative Governance (DCOG) indicated that "we always make sure that SALGA as the representative of local government participates or play a role in each process or step in the policy development process, for instance with this IUDF that I've mentioned, SALGA, we are always sensitive, if we don't involve SALGA which represents the interest of local municipalities, then that policy or that framework or that document cannot find the light of the day" (DD_SD, 2019).

This understanding of the policy formulation process as messy was further elaborated by Department of Cooperative Governance and Traditional Affairs when acknowledging that "the policy development process, as much as we engage with our sister departments like your water and sanitation department, probably health department, the key departments that she mentioned, usually the process is not like a step-to-step process of policy formulation" (DD_SD, 2019).

It emerged from this study that departments establish their own mechanisms of how they engage one another on matters of policy development. This emerged during interviews when the Department of Cooperative Governance and Traditional Affairs was asked whether they engage the Department of Water and Sanitation at policy practitioners' level, mentioned that "we do engage with them on a policy level, for instance, around 2012, they were consolidating the water Act and the Sanitation Act. There was a committee that was established which included also national treasury, SALGA, ourselves and the service provider that was working on that. So we had to be part of that committee so that we can guide and also share experiences and be just part of that because as I have just said that we are the custodians of local government and as COGTA our role is to ensure that if there are any policies that are being reviewed, or drafted or initiated, the local government interests are being put forward and also section 9 and 10 of the Municipal Systems Act is also taken into consideration when there are any new policies, so we were indeed part of that committee. And also we ourselves are in a process of reviewing section 84 and 85 of Municipal structures Act. We have also established a reviewing

committee of all stakeholders that will be impacted by this review and water is the main stakeholder on this one because in terms of that structure Act, our Minister who is responsible for local government is the only one who can authorize the district municipality or the local municipality to undertake the water function, electricity function, health function and the sanitation" (DD_LM, 2019).

In view of the above, it is imperative to have a standard approach to how and when other government institutions should be engaged when a department is developing policies. In this instance, the initial Socio-Economic Impact Assessment, under the section that deals with 'identification of stakeholders and their role in the policy', should be able to identify the departments to be involved. It must be a standard requirement that the initiating department should engage and involve the identified departments from that stage until policy approval and or implementation. This must take place whether the outcomes of the SEIAS indicated that there is a need or no need for a new policy or review the existing policies. This in turn will also require that government departments establish policy teams within each department that will always collaborate with other departments on matters of policy development and design. For this function to be executed optimally and judging from the policy Units of the Department of Water and Sanitation and Department of Cooperative Governance and Traditional Affairs (with an average of 7 policy practitioners), departments will have to invest more in expanding the numbers and capacity of policy practitioners.

This assertion was further expanded by the Department of Cooperative Governance and Traditional Affairs when one of the respondents articulated that, using one of the previous policy engagements with the Department of Water and Sanitation, "There was a committee that was established which included also national treasury, SALGA, ourselves and the service provider that was working on that. So we had to be part of that committee so that we can guide and also share experiences and be just part of that because as I have just said that we are the custodians of local government and as COGTA our role is to ensure that if there are any policies that are being reviewed, or drafted or initiated, the local government interests are being put forward and also section 9 and 10 of the Municipal Systems Act is also taken into consideration when there are any new policies" (DD_LM, 2019).

The Department of Cooperative Governance and Traditional Affairs further emphasized that this is not an unusual process because the department also follows the same procedures when reviewing its policies. The department indicated that the similar process is currently unfolding whereby "If you look at everything else that the municipalities are doing, water is the main function. So we are currently at the process of reviewing that section. We are doing it in collaboration with the DWS, SALGA and also, what do you call this, South African Demarcation Board, yeah. So at length, that's where we are with consultations" (DD_LM, 2019). In a sharp contrast with the above response on outlining the process of policy making in the department, the Department of Water and Sanitation does not have standardized and documented policy development process as the point of reference. All respondents referred to the draft framework which is not yet in operation.

The point on **evidence integration to policy development and design** also emerged during engagements with the Department of Cooperative Governance and Traditional Affairs, the respondents highlighted that evidence provide details about the problem itself and the context in which the problem exists. One of the respondents deposited that "this thing of trying to solve or crafting policies at this level, you know, where you not understanding exactly what is happening, what are the challenges at the local space, you know it becomes a problem. So this issue of evidence based research, you know, or policy formulation informed by evidence on the ground is very critical" (DD_SD, 2019).

There are institutions in the water and sanitation sector that are responsible for implementation of decisions taken by the national Department of Water and Sanitation, such as municipalities, in a form of Water Services Authorities (WSAs). This study recognizes Water Services Authorities as crucial stakeholder in the water and sanitation value chain. The ones that translates policy statements into actual services to the citizens. This makes their role in providing crucial and much needed evidence much bigger in a sense that it has both capacities to understand issues at a given context and as absorbers of service delivery feedback from the ground.

The Department of Cooperative Governance and Traditional Affairs further articulated that evidence provides details about the problem itself and the context in which the problem exists. One of the respondents deposited that "this thing of trying to solve or crafting policies at this level, you know, where you not understanding exactly what is happening, what are the

challenges at the local space, you know it becomes a problem. So this issue of evidence based research, you know, or policy formulation informed by evidence on the ground is very critical" (DD_SD, 2019).

Evidence collection for purposes of policy development and design, in this point, the Department of Cooperative Governance and Traditional Affairs (COGTA) indicated that although municipalities are critical stakeholders that are responsible for policy implementation however the department is caught between local and national government when it comes to water and sanitation issues. The department acknowledged and appreciated its role as the facilitator between municipalities and the Department of Water and Sanitation but the manner in which the functions between the DWS and COGTA are structured made it difficult to coordinate because COGTA is seen by municipalities as both regulators and representative of their interests at national level. This was highlighted when COGTA made an example about COGTA authorizing a municipality to become a Water Services Authority and regulation and performance dealt with by the DWS.

5.3 PRESENTATION AND DISCUSSION OF DATA COLLECTION USING THE QUESTIONNAIRE

5.3.3 FINDINGS FROM SURVEY

5.3.3.1 Profile of respondents

Survey questionnaire targeted eThekwini municipality officials in the Water and Sanitation Department. A total of 100 employees between task grade 14 and 18 were targeted. Figure 11 below shows the composition of 72 respondents that responded to survey questionnaires posed to them (both online and telephonic responses). Respondents were 50% male and 50% females with all of them in possession of a graduate and or post graduate qualifications. Most of them, 50 out of 72 respondents, falls within the age group of 30 to 49 years of age.

The data indicates that 50% of respondents have been working for the Water and Sanitation Department in eThekwini Municipality for more than 10 years. The respondents' profile indicates that 82% and 13% are employed at the professional and senior management levels, respectively. This indicates that the Department consist predominately of youthful and qualified employees which are more likely to have good command and comprehension of the subject under investigation.

Figure 11: Respondent's employment level and years of service

Category of employment within water and sanitation

- OTHER: 6%
- SENIOR MANAGEMENT: 13%
- PROFESSIONAL: 82%

Years of employment within Water and Sanitation

- 0 – 5 years: 18%
- 5 – 10 years: 32%
- More than 10 years: 50%
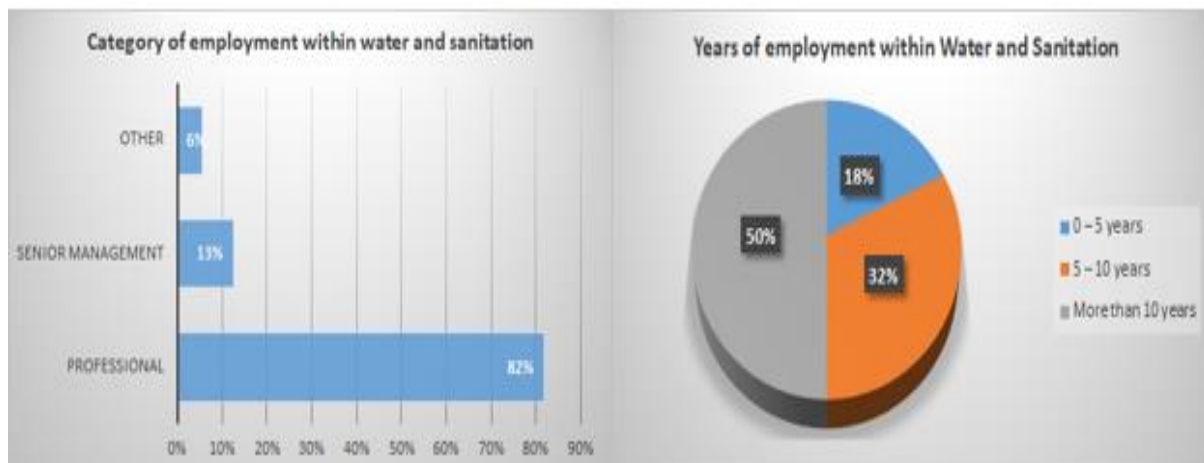
The findings are presented according to the themes below:

5.3.3.2 Contextualizing and understanding public policy making in the Department of Water and Sanitation

From the survey point of view, figure 12 below indicates that most respondents, which is 84%, also confirmed that they have knowledge of which department is responsible for water and sanitation policy making in South Africa. Only 13% have no knowledge of which department is responsible for policy development in the South African water and sanitation sector.

Figure 12: Percentage of respondents who are familiar with the department responsible for policy making

Are you familiar with who is responsible for water and sanitation policy manking in SA?

- Yes: 84%
- Not sure: 3%
- No: 13%
- I do not know anything about who is responsible: 0%
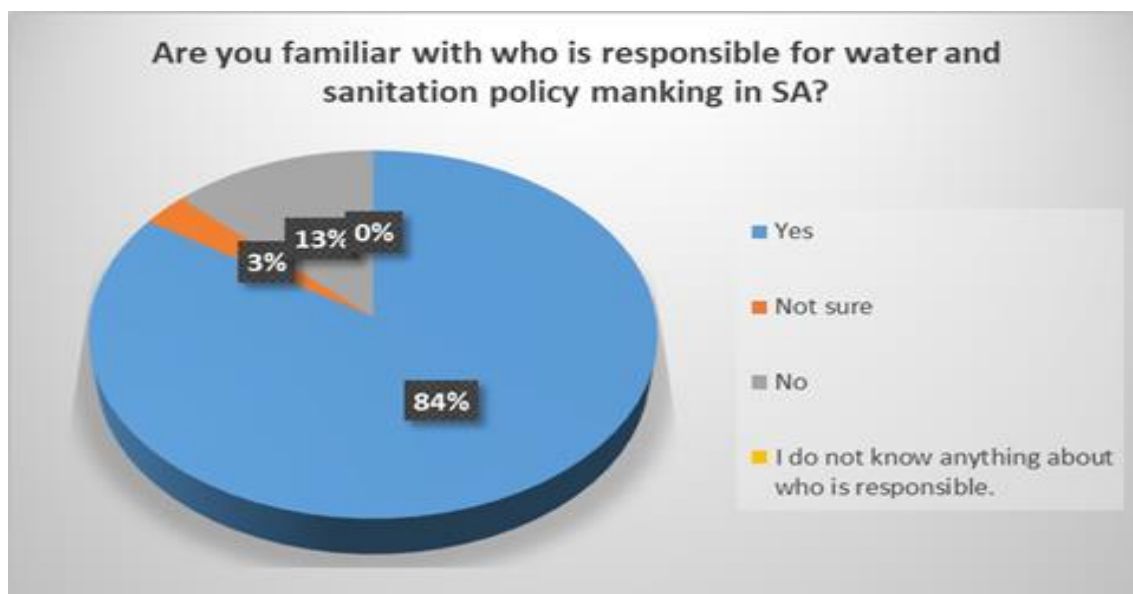
Although the majority of respondents (84%) have knowledge of the department responsible for water and sanitation policy development in the country as reflected in figure 13 below, but only 62% are aware of which department has decision making powers whether to develop or not to develop water and sanitation policy in South Africa.

Figure 13: Percentage of respondents who have knowledge of department responsible for making policy decisions
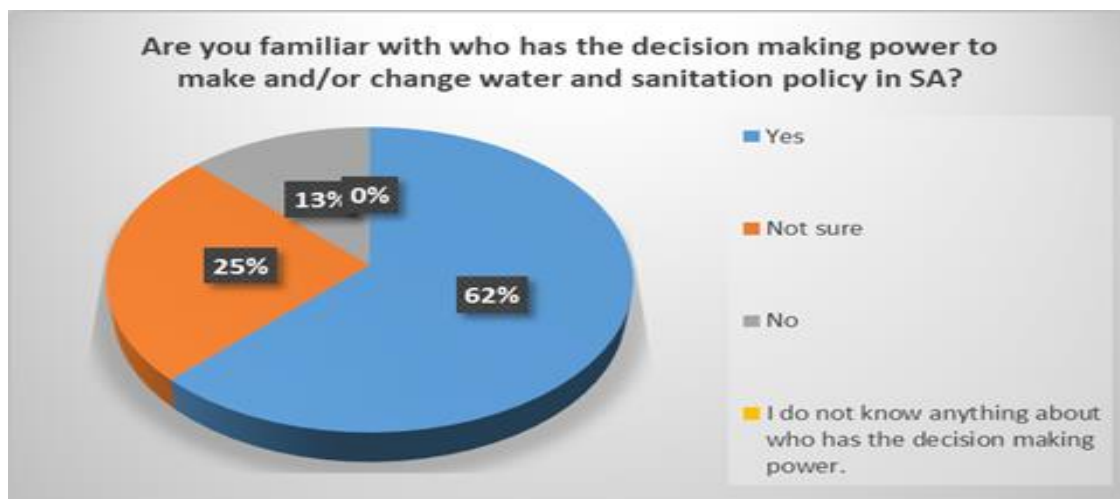
Contrary to the narrative presented by the Department of Water and Sanitation above in terms of its policy development process, eThekwini Water and Sanitation Department demonstrated no clear understanding or knowledge of the process with 63% being not sure, have no knowledge and not knowing anything about the procedures. In addition, only 37% of respondents indicated that they are aware of the process and procedures as indicated in figure 14 below.

Figure 14: Knowledge of policy development procedures
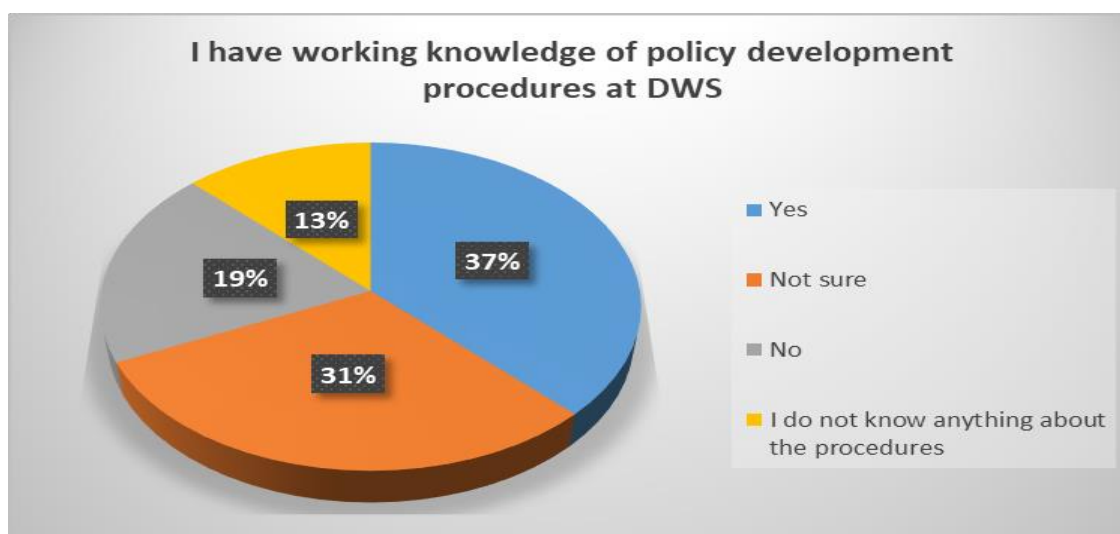
Furthermore, the data emanating from the eThekwini Municipality's survey respondents indicates that 44% of respondents do know other stakeholders that participates in the water and sanitation policy making process at national level. This is depicted in figure 15 below.

Figure 15: Knowledge of stakeholders participating in policy process

However, figure 16 below indicates that the communication between eThekwini Water and Sanitation Department officials ranges from 'at least once a month' to 'at least once a year'. This was revealed by 44% of respondents rating it at 'at least once a month' and the majority (56%) rating it at 'at least once a year'.

Figure 16: Communication between eThekwini Municipality and DWS
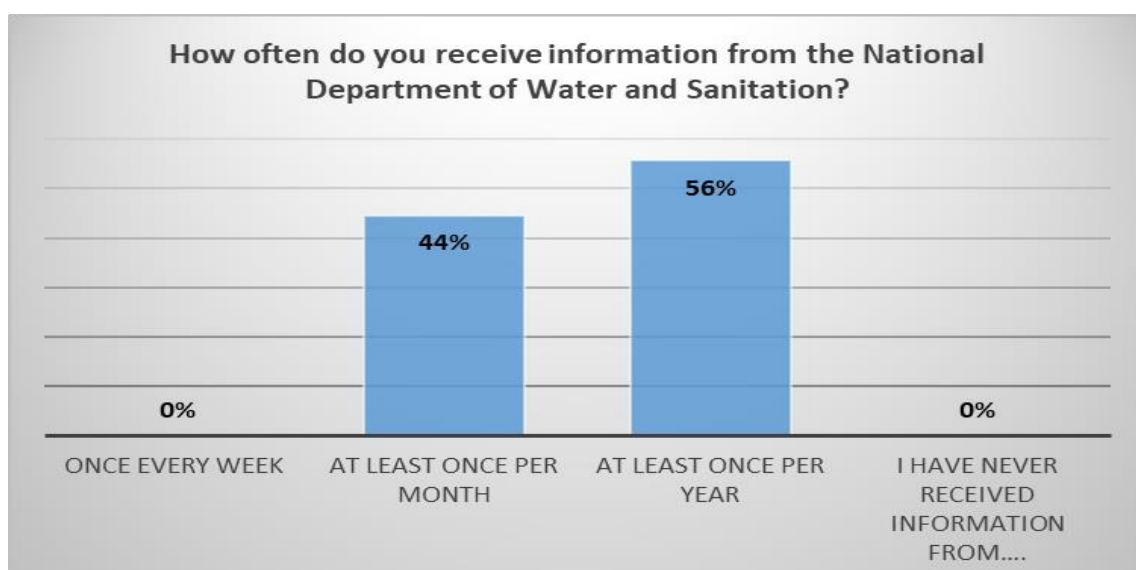
5.3.3.3 Understanding what count as evidence in evidence-based policy making

From the implementer's perspective, most respondents from eThekwini Water and Sanitation Department are of the view that the kind of information they submit to Department of Water and Sanitation can be useful for purposes of policy development. Therefore, should be regarded as evidence. This was indicated by the 43% of respondents agreeing with the statement that 'the information I submit to the Department of Water and Sanitation can be useful in making policy decisions' and 19% strongly agreeing. None of the respondents either disagreed or strongly disagreed, except the remaining 38% indicating that they are not sure. These findings concurred with the argument by Head (2015) when arguing that government agencies gather and assess a significant amount of information but there has been little analysis of how this information is utilized for policy and program improvement.

It was further noted that the majority of respondents from eThekwini Water and Sanitation Department are of the view that the kind of information they submit to Department of Water and Sanitation can be useful for purposes of policy development, as indicated in figure 17 below. This was indicated by the 43% of respondents agreeing with the statement and 19% strongly agreeing with the statement. None of the respondents either disagreed or strongly disagreed, except the remaining 38% indicating that they are not sure.

Figure 17: Importance of information submitted to DWS for policy decisions
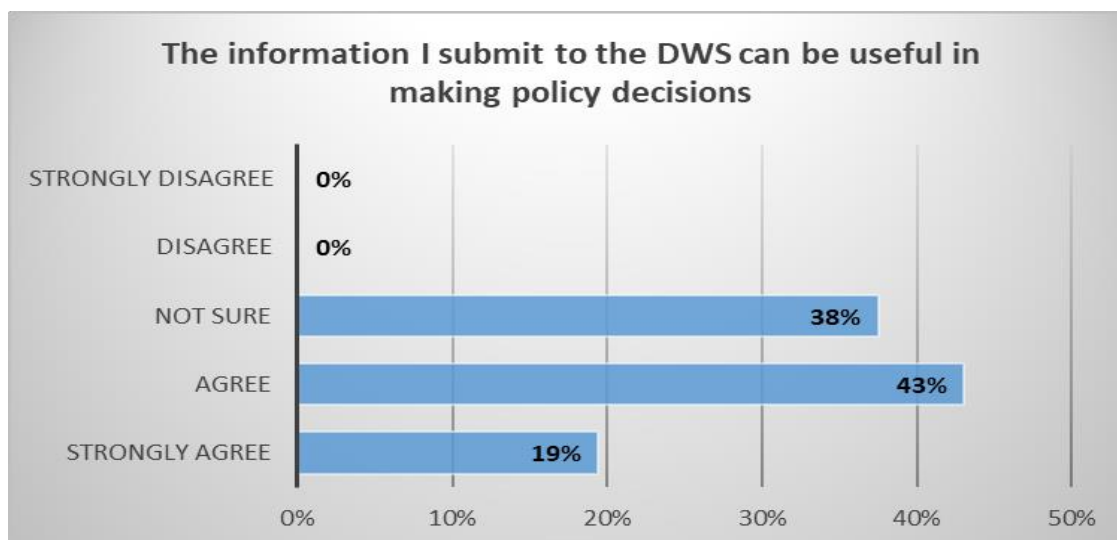
Like in a case of interview respondents, survey respondents from eThekwini Water and Sanitation Department were also asked to indicate what they consider constituting evidence in their view. Seven categories were provided to them which were: expert knowledge; stakeholder consultation; previous evaluations; published research; values and beliefs; all of the above; and, I do not know. In their responses, 6% indicated expert knowledge, 7% stakeholder participation, and with 88% indicating all of the above. No respondent indicated that they have no knowledge of what constitute evidence. These responses are illustrated in figure 18 below.

Figure 18: What is regarded as evidence
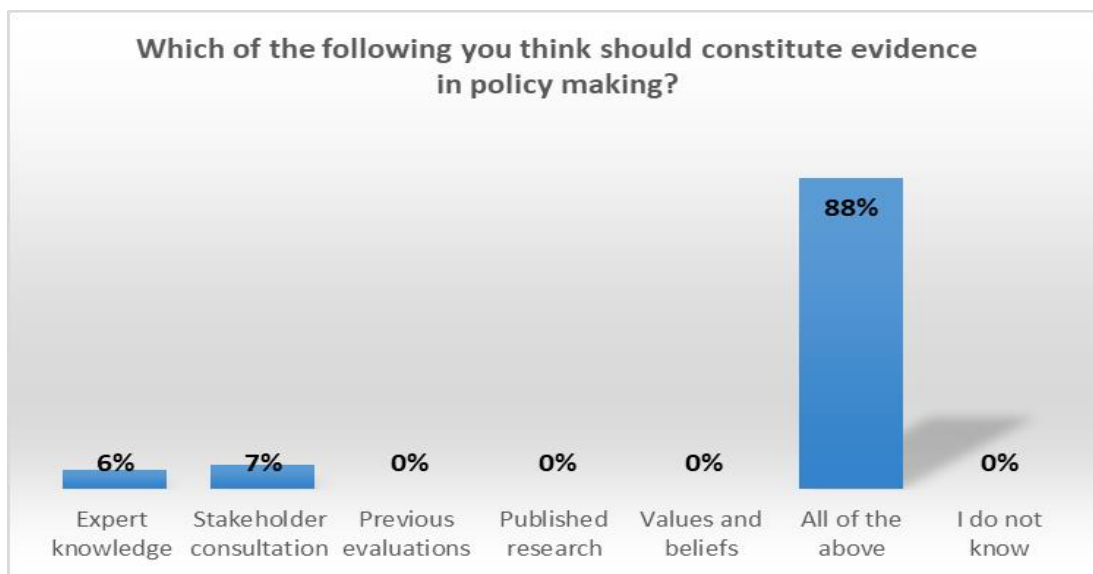
5.3.3.4 Bridging the gap between research and policy

In addition to evidence being important part of policy making process, respondents were further asked whether they consider research as important piece of evidence, overwhelmingly, about 95% considered research as important form of evidence in policy making. In this, 31% indicated that they agree with the statement while 63% strongly agreed.

Emanating from the understanding that research is one crucial piece of evidence as argued by Young, Gropp, Pintar, Waddell, Marshall, Thomas, McEwen, and Raji (2014), respondents from eThekwini Water and Sanitation Department were asked to indicate whether undertaking research was part of their responsibilities, about 82% indicated that it was part of their responsibilities, with only 13% indicating otherwise. This suggests that there is a significant amount of research information stored somewhere in the Water and Sanitation Department

which is not being used as Head (2005) argues. This disprove the argument by Hammersley (2005) that research evidence is not always available.
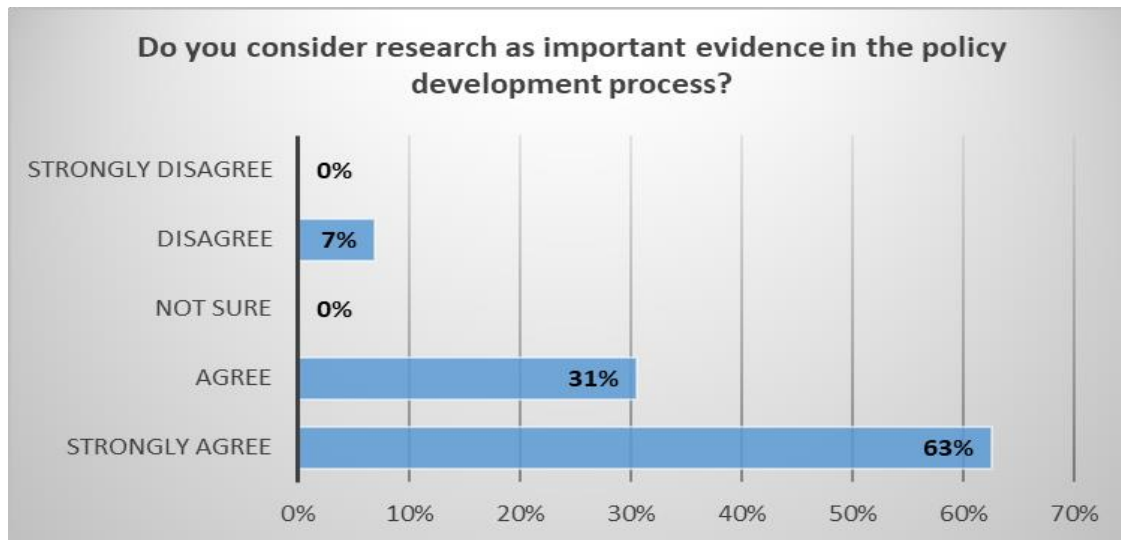
Furthermore, the data also reflect that most respondents from Water and Sanitation Department of eThekwini Municipality do undertake research as part of their responsibilities which ranges from at least 'once a year' (13%), 'every couple of months' (38%) and 'once per month' (18%). In total, 69% of respondents indicated within this range. While 19% chose not to respond, 13% indicated that they never undertake research in any given period. This is in concurrence with the 13% of respondents that previously indicated that research was not part of their responsibilities.

Although most respondents do undertake research (69%), and with about 93% of respondents considering research as important evidence in policy making process, about 38% of respondents undertake research just to file research report while 25% conduct research for purposes of submitting to Council. Although 38% chose a 'no response' option but it is also worth noting that none of the respondents share their research outputs with either the Water Research Commission or the Department of Water and Sanitation. The gap between research and policy in this instance is quite visible. Evaluative research studies from local implementation is not being used to inform national policy making process. In my view, this is another quite important piece of evidence to inform policy making process. This is informed by the assertion by Marais and Matebesi (2012: 360) when arguing that knowledge "is socially and culturally constructed and varies accordingly. Claims towards generally accepted aspects of policy for all people and in all conditions are thus unfounded".

Despite local evaluative research reports by Water Service Authority not being used to inform policy development and design by the Department of Water and Sanitation, it appears that generally, the gap between national Department of Water and Sanitation and eThekwini Water and Sanitation seems to be too wide. The figure below indicates that many respondents (63%) never sends any kind of information to the national Department of Water and Sanitation, with only 37% indicating that they do send information to national at least once a month (25%) or once a year (13%) as shown in figure 28, in the preceding chapter. This question was in relation to any kind of information not only research reports.

In addition to evidence being important part of policy making process, respondents were further asked whether they consider research as important evidence, overwhelmingly, about 95% considered research as important form of evidence in policy making. In this, 31% indicated that they agree with the statement while 63% strongly agreed, as indicated in figure 19 below.

Figure 19: Importance of research evidence in policy making

Research as identified to part of crucial evidence, respondents from eThekwini Water and Sanitation Department were asked to indicate whether undertaking research was part of their responsibilities, about 82% indicated that it was part of their responsibilities, with only 13% indicating otherwise as shown in figure 20 below.

Figure 20: Respondents who conduct research as part of their duties
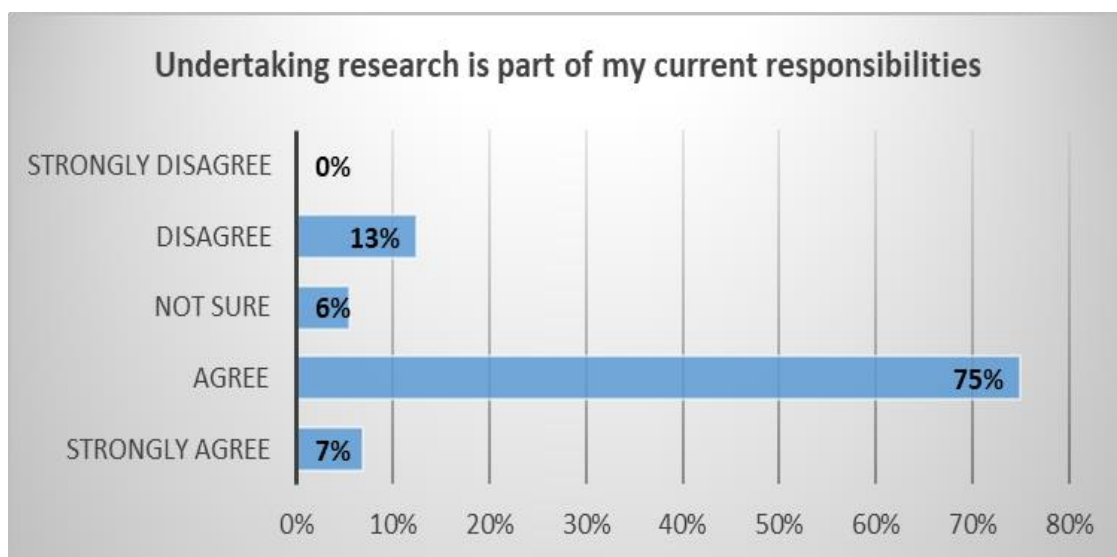
Figure 21 below indicates that the majority of respondents from Water and Sanitation Department of eThekwini Municipality do undertake research as part of their responsibilities which ranges from at least 'once a year' (13%), 'every couple of months' (38%) and 'once per month' (18%). In total, 69% of respondents indicated within this range. While 19% chose not to respond, 13% indicated that they never undertake research in any given period. This is in concurrence with the 13% that indicated that research is not part of their responsibilities in figure 20 above.

Figure 21: The frequency of undertaking research
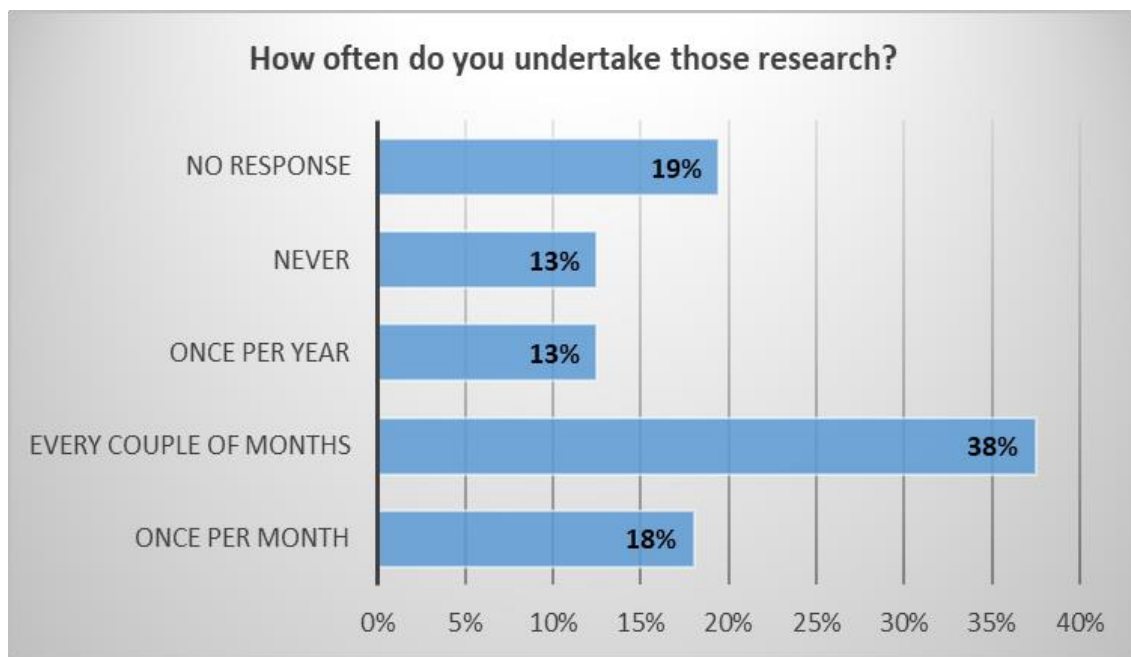
Although the majority of respondents do undertake research (69%) and with about 93% of respondents considering research as important evidence in policy making process, about 38% of respondents undertake research just to file research report while 25% conduct research for purposes of submitting to their political executives (Council). Although 38% chose a 'no response' option but it is also worth noting that none of the respondents share their research outputs with either the Water Research Commission or the Department of Water and Sanitation. This is illustrated in figure 22 below.

Figure 22: What happens to research reports
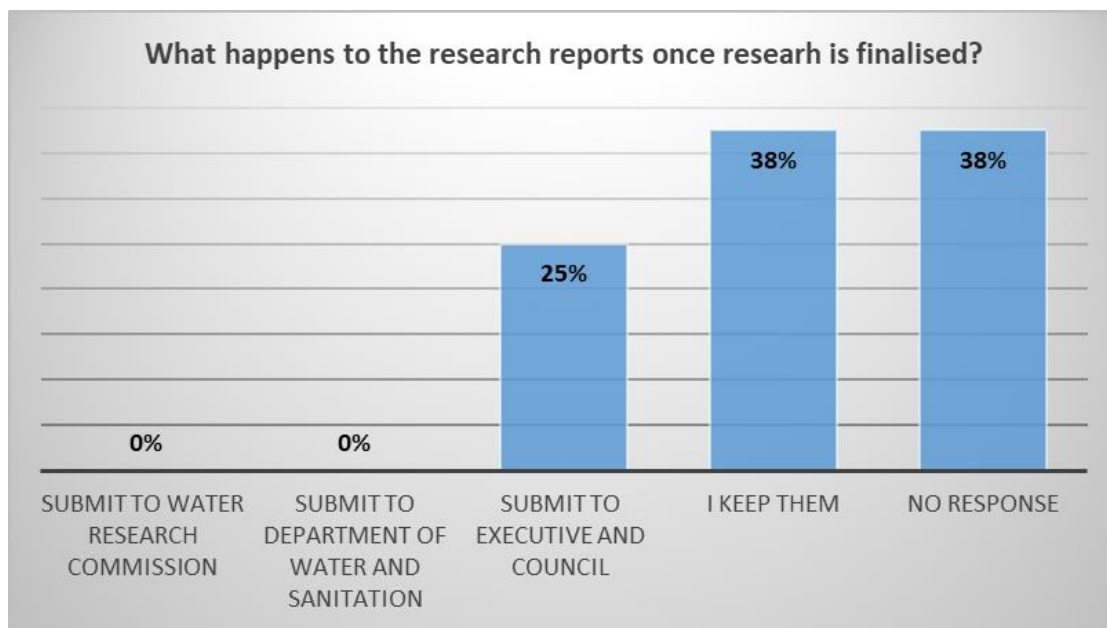
The figure below indicates that the majority of respondents (63%) never sends any kind of information to the national Department of Water and Sanitation, with only 37% indicating that they do send information to national at least once a month (25%) or once a year (13%) as shown in figure 23 below. This question was in relation to any kind of information not only research reports.

Figure 23: Frequency of implementation feedback from eThekwini to DWS
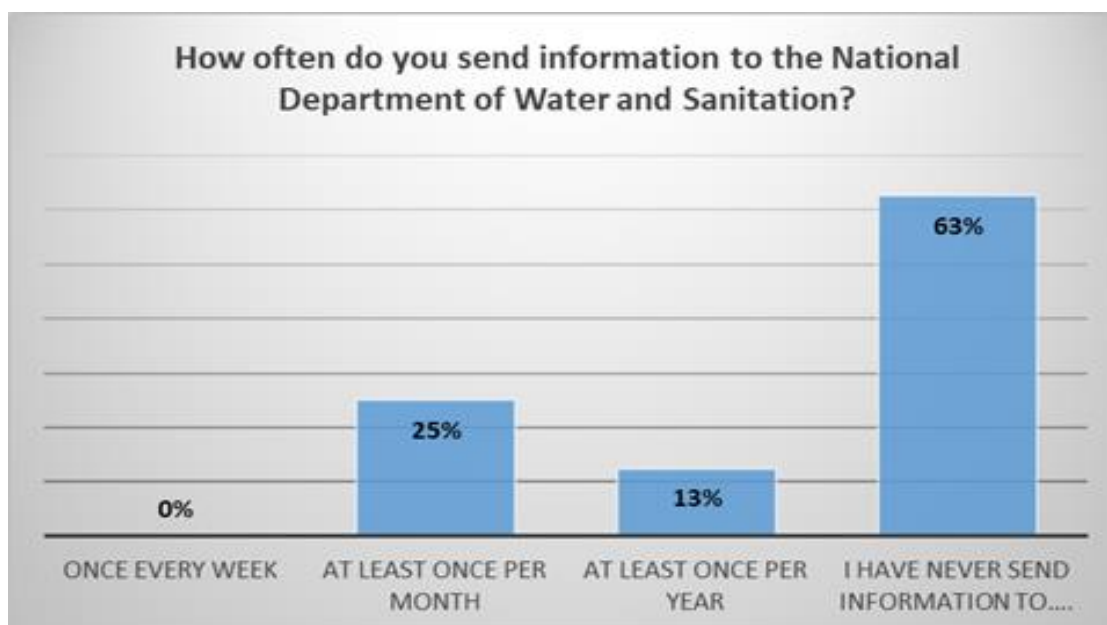
5.3.3.5 Evidence integration to policy development and design

From the eThekwini Municipality's perspective, there was consensus that evidence is crucial in policy making process and that "there should be other documents to be visited, research alone cannot be used as the only evidence, I think some of the documents they use should be visited" (AH_WS, 2019). And this point was also supported by another respondent when highlighting that "My understanding policies are a law and if the law is not informed then it means that the law is not gonna be enforceable" (PE_WS, 2019). This assertion was further supported by surveyed respondents where 38% of respondents agreeing with this assertion and about 63% strongly agree.

However, responses on whether the current policy formulation process is informed by evidence, respondents seems not to be convinced that it is. The majority formed part of 'not sure and disagree' percentage. About 13% disagree with the statement that the current policy formulation process is informed by evidence while 57% was not sure, only 31% agreed that it is informed by evidence.

The eThekwini Municipality respondents seems to be not sure about the evidence use and the process of policy making in the Department of Water and sanitation. This was reflected when they were given two statements on whether the Department uses evidence to inform policy decisions or uses evidence to support decisions that were already taken by the Department. In both statements, the responses were the same, about 7% chose 'strongly disagree', 56% chose 'not sure', and 38% chose 'agree'.

Similarly, survey respondents concurred with the views of interviewees that evidence is an important element of policy making. This was confirmed by 38% of respondents agreeing with this assertion and about 63% strongly agree, as shown in figure 24 below.

Figure 24: Importance of evidence in policy making
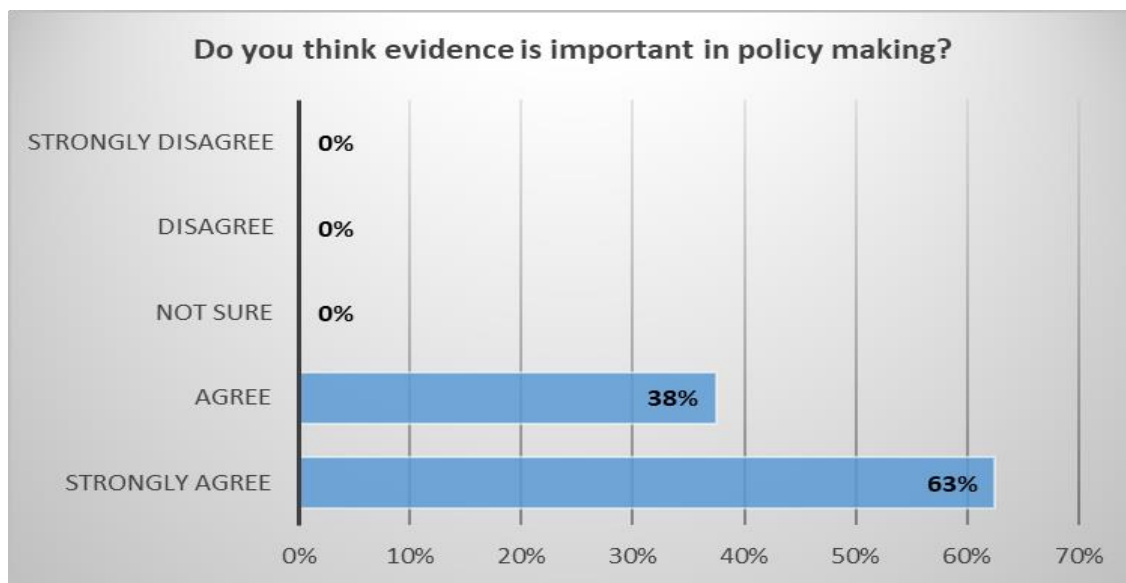
However, responses on whether the current policy formulation process within the Department of Water and Sanitation was informed by evidence, respondents seems not to be convinced that it is. The majority formed part of 'not sure and disagree' percentage. About 13% disagree with the statement that the current policy formulation process within the Department of Water and Sanitation was informed by evidence while 57% was not sure, only 31% agreed that it was informed by evidence. These responses are illustrated in figure 25 below.

Figure 25: Current policy formulation informed by evidence
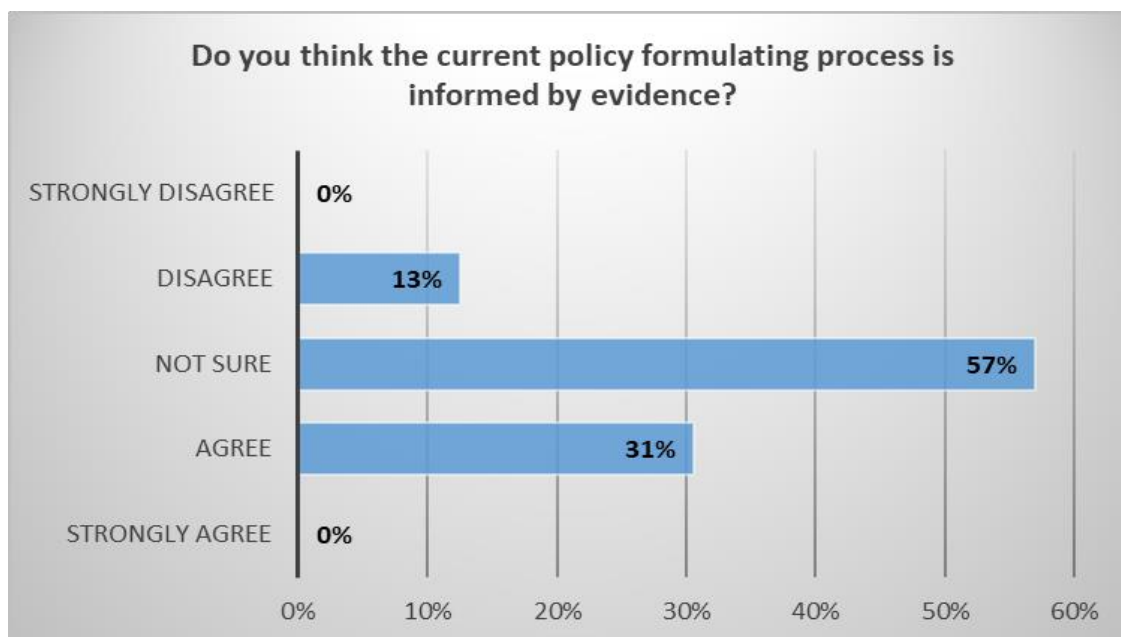
The eThekwini Municipality respondents seemed to be not sure about the evidence use and the process of policy making in the Department of Water and sanitation. This was reflected when they were given two statements on whether the Department uses evidence to inform policy decisions or uses evidence to support decisions that were already taken by the Department. In both statements, the responses were the same, about 7% chose 'strongly disagree', 56% chose 'not sure', and 38% chose 'agree'.

5.3.3.6 Evidence collection for purposes of policy development and design

Contrary to this view by the Department of Water and Sanitation, the eThekwini Water and Sanitation Department painted a different picture in as so far as their participation is concerned. About 75% of respondents indicated that they have not attended any policy consultation session or workshop organized by the Department of Water and Sanitation. Only 25% indicated otherwise as indicated in figure 26 below. This response raises questions on the level of participation of Water Services Authorities in general, not only eThekwini Municipality.

Figure 26: Attendance of policy consultation sessions
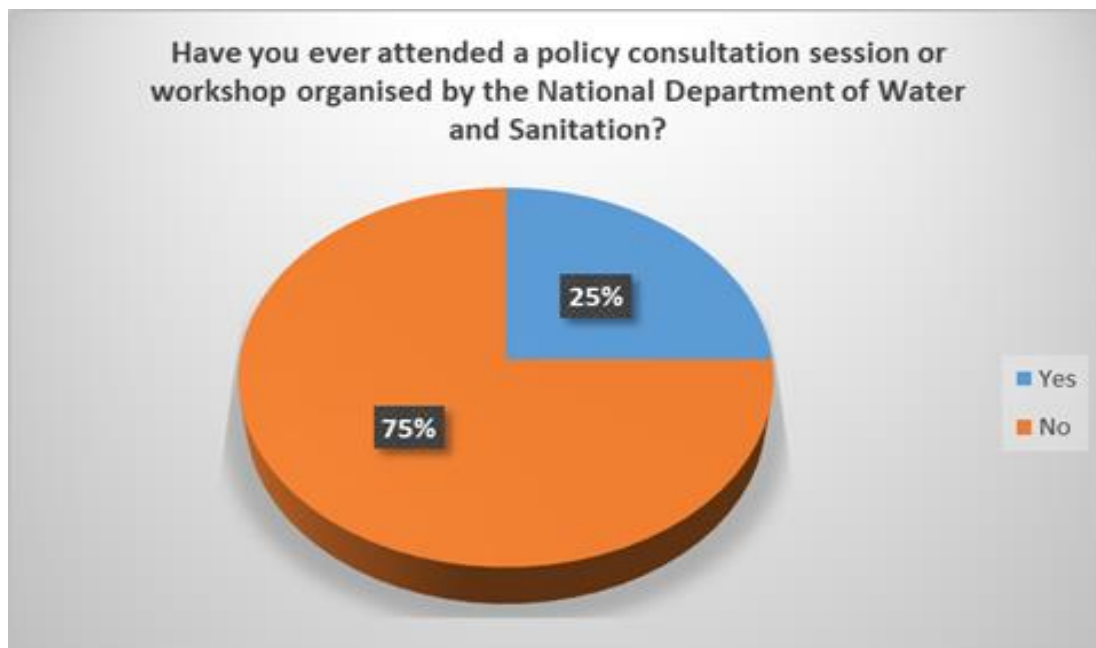
5.3.3.7 Organisational capacity and contribution

At professional and technical level, there is proof of willingness to participate in policy making process from the side of eThekwini Municipality. There is also an indication that the respondents were quite confident that what they are currently doing now can immensely contribute to policy making. This was clearly demonstrated by their response to the statement

of whether they would like to participate in national policy formulation process at the Department of Water and Sanitation. Their responses were, as reflected in figure 27 below, about 25% strongly agree, 50% agree, 19% not sure and only 6% strongly disagree.

Figure 27: Participation in policy making process in the future
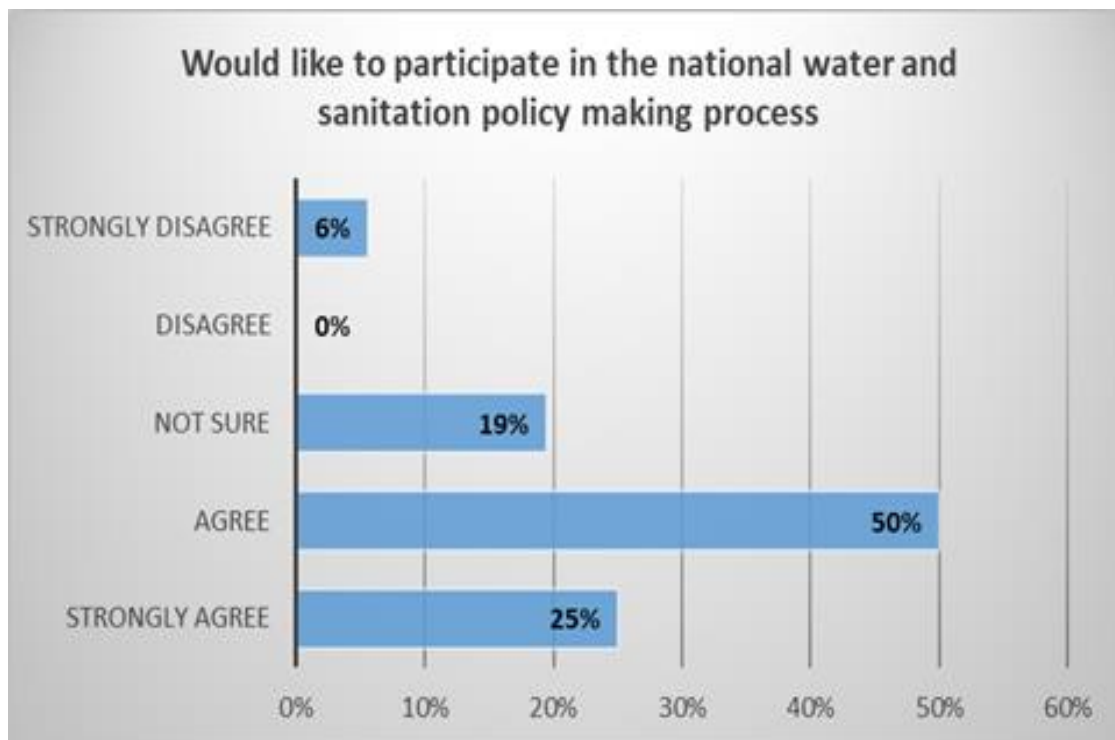
However, when it comes to survey responses from the same eThekwini Water and Sanitation Department, most respondents (57%) to the same question indicated that they were either in disagreement or not sure. Figure 28 below indicates that about 13% disagree and 44% not sure. In addition, 31% and 13%, agree and strongly agree, respectively. The majority stated their reasons as: Lack of capacity within the unit. Most of the experienced professionals have already retired. The gap between the retired and the new incoming incumbents are large thus leading to in experienced professionals. Further, professionals from other disciplines are included into the water business (due to a shortage of water professionals) and thus don't have the required experience or knowledge of the water business. Institutional knowledge is important" (responses to question 28 of the survey questions).

Figure 28: Capacity to translate policy into bylaws
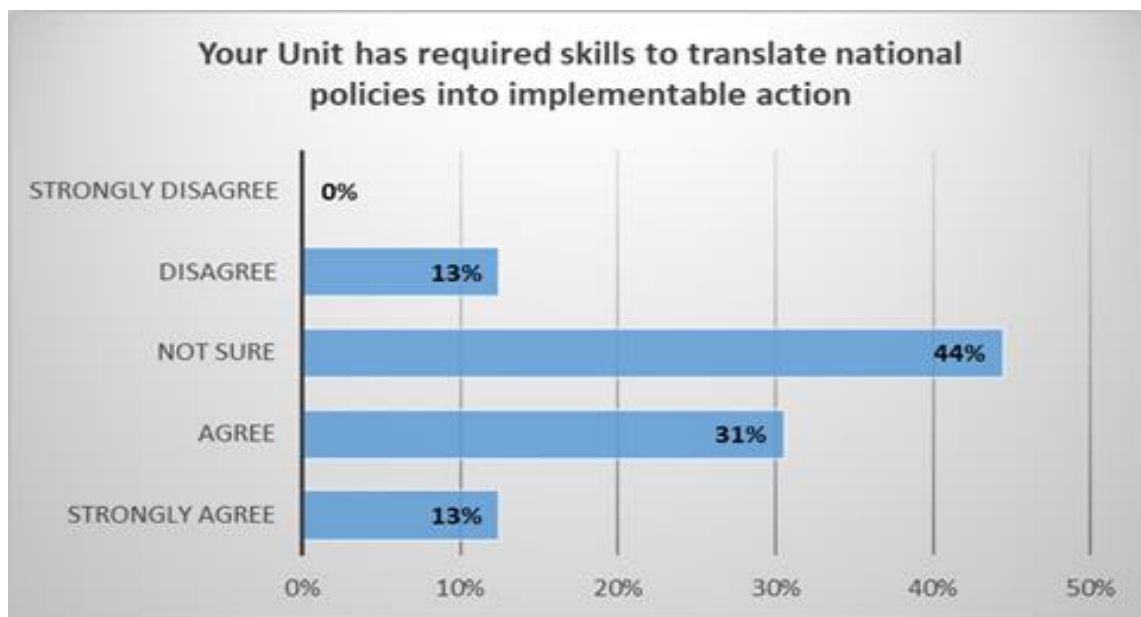
The municipality has made policy comments and submissions in the past. This was evident in survey responses where in other instances, respondents will even provide the name of policies in which they participated such as "Water use license, NWRS2, eThekwini Water Bylaws include reuse, policy on hydropower scheme" (Commentary response to question 25). Figure 29 below indicates that at least 18% of respondents have, in the past, made submissions to a draft water and sanitation policy.

Figure 29: Number of respondents who made or did not make policy submission in the past
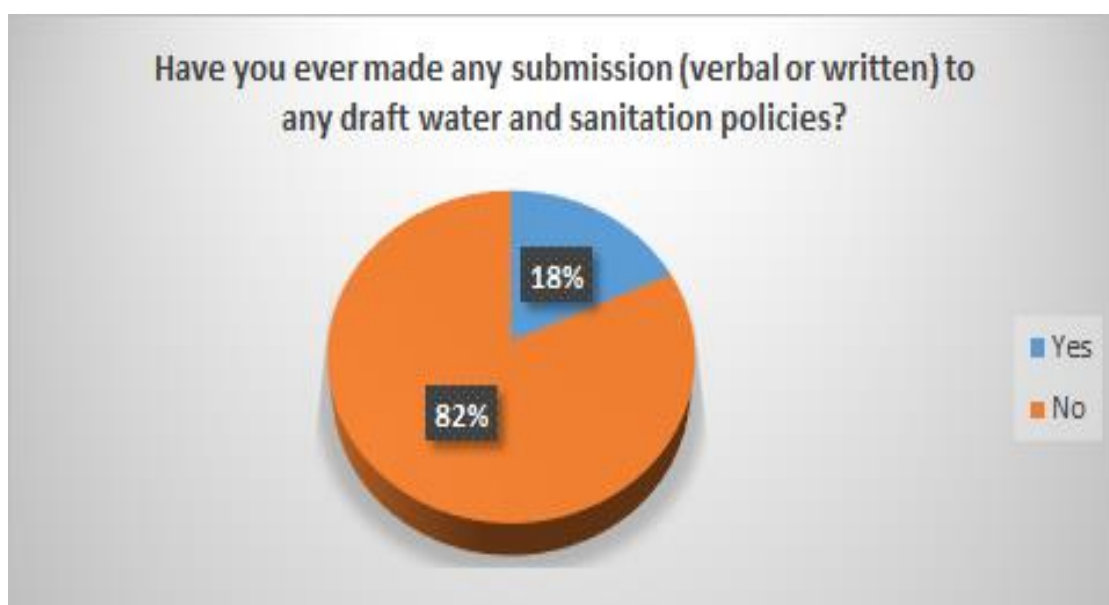
In other instances, respondents were able to define their role in the process as "Technical, not sure however, it must be a role where my technical input can be considered, Part of Technical Committee as a water service authority. Advisory based on being involved in day to day implementation, Research and Technical expertise contribution reviewing policy formulated by the department to ensure it speaks to the needs on the ground, Policy reviewer, A stakeholder in the Sanitation Space, Providing information based on information from my current projects that can help develop policy" (Commentary responses to question 28 of the survey questions).

The overall feeling about the internal state of affairs in eThekwini Water and Sanitation Department, respondents felt that the Department has capacity to develop and implement policies and its policies are effective. From the survey questions responses, half of respondents indicated that the state of internal policies is "effective" while 38% thinks that it's in a "poor" state and about 13% being "not sure". This is depicted in figure 30 below.

Figure 30: Status of policy making in water and sanitation department in eThekwini
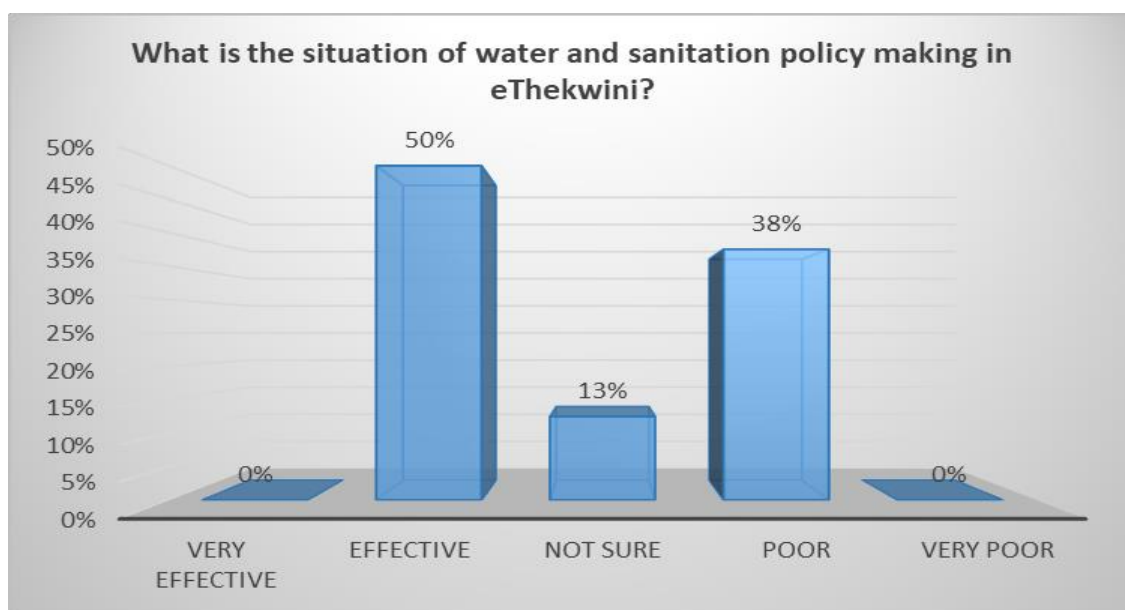
In terms of the survey responses, eThekwini Water and Sanitation Department was given 4 policy implementation challenges to choose from. Those were; Translating policies into bylaws; policy provisions are too rigid; lack of relevant skills set to implement; other. Important to note is that translation of policies into bylaws was never highlighted as a challenge. The

respondents only mentioned policy provisions are too rigid; lack of relevant skills set to implement; and other, as their policy implementation challenges as shown in figure 31 below.

Figure 31: Policy implementation challenges
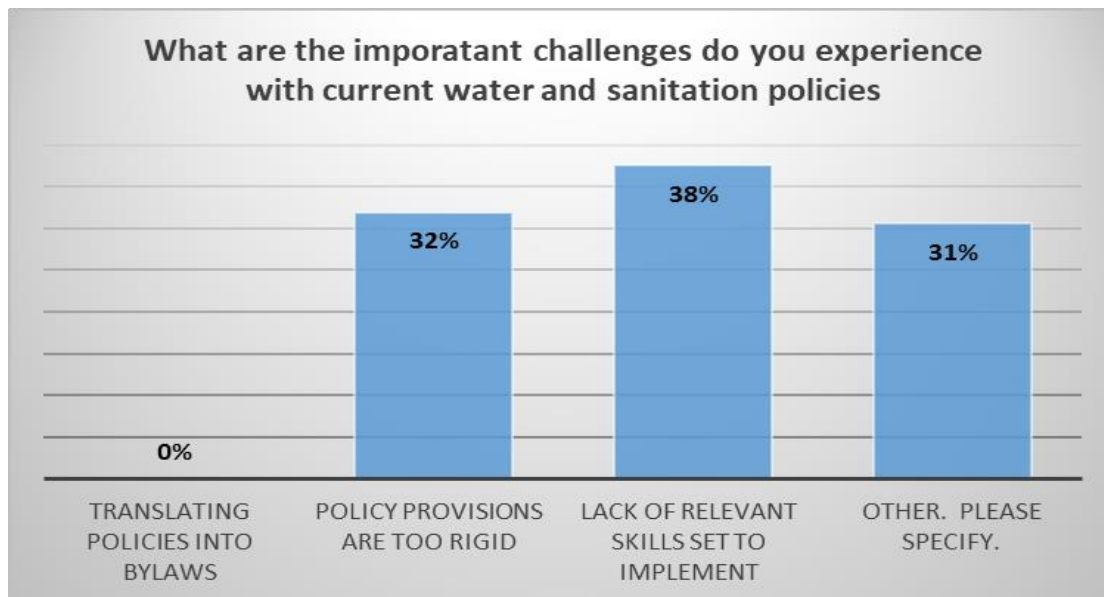
When the question of whether the policy implementation feedback from the Municipalities must be made mandatory by the Department of Water and Sanitation in order to improve future policies, most respondents seems to be undecided as 69% indicated that they were 'not sure' while only 18% agreed that it should be mandatory. This is illustrated in the figure 32 below.

Figure 32: DWS should require municipalities to submit policy implementation feedback
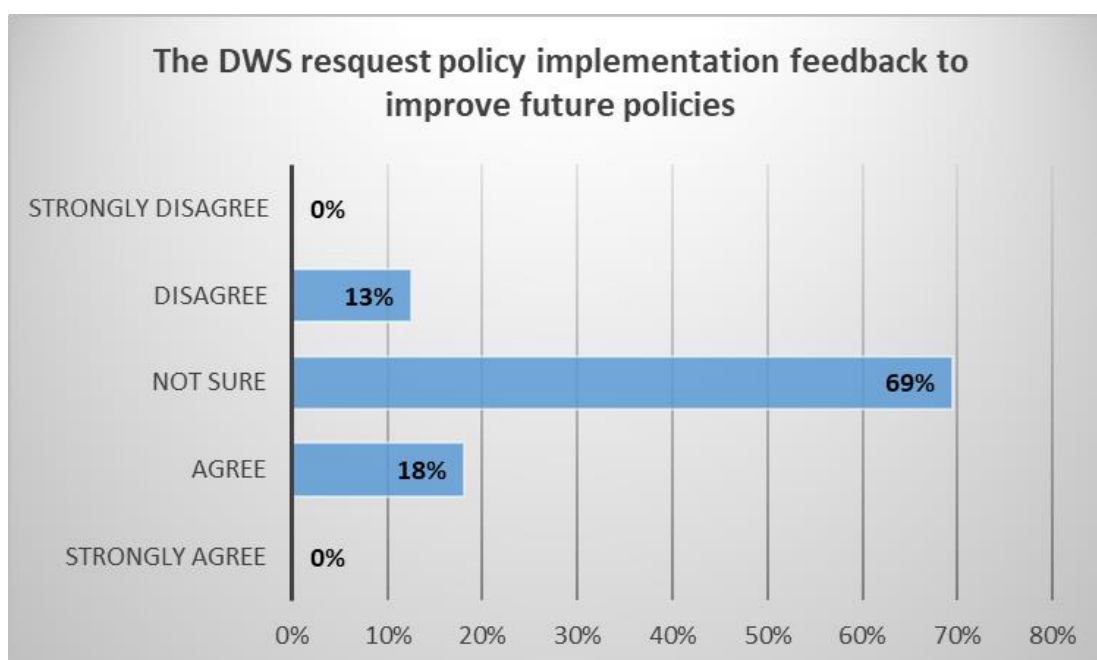
On the question of whether the current water and sanitation policies are effective from the eThekwini municipality's perspective, only 25% agreed with that statement, 31% was not sure, 32% disagreed, with 13% strongly disagree, as indicated in figure 33 below.

Figure 33: Current water and sanitation policies are effective
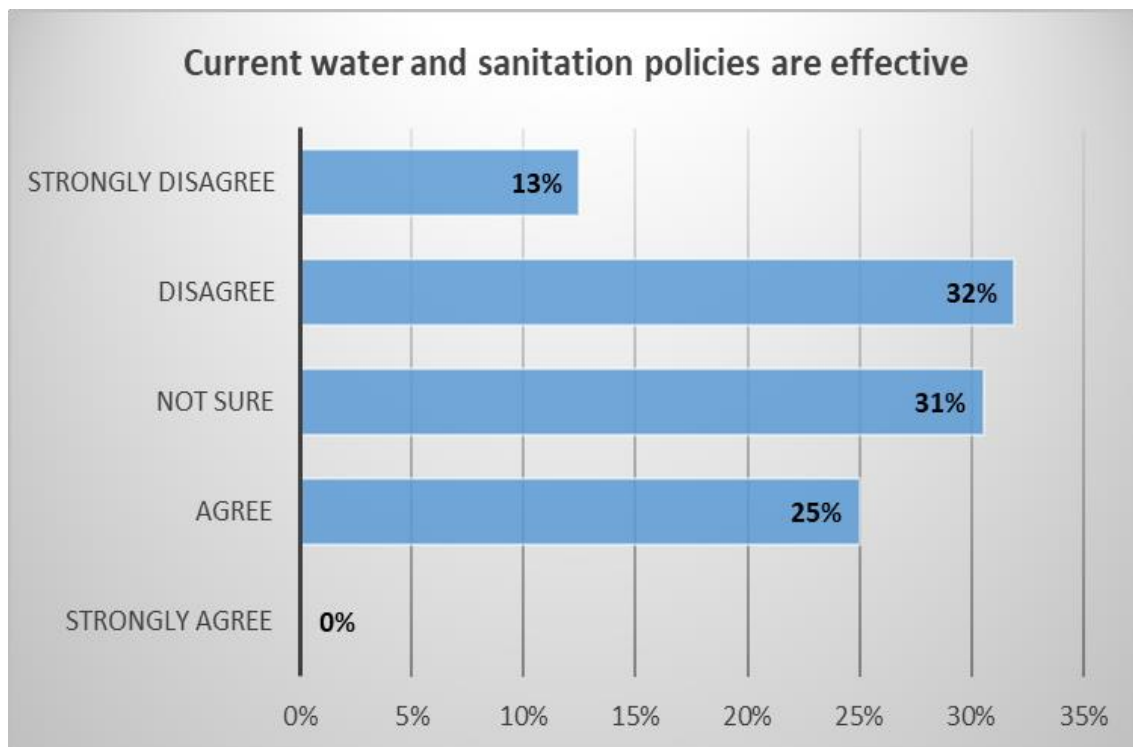
Although 25% agreed with the statement that the current policies are effective, but 38% believed that current policies are hindrances to the way in which they would like to perform their duties. About 32% disagree, while 31% was not sure. This is reflected in figure 34 below.

Figure 34: Current water and sanitation policies hinders service delivery
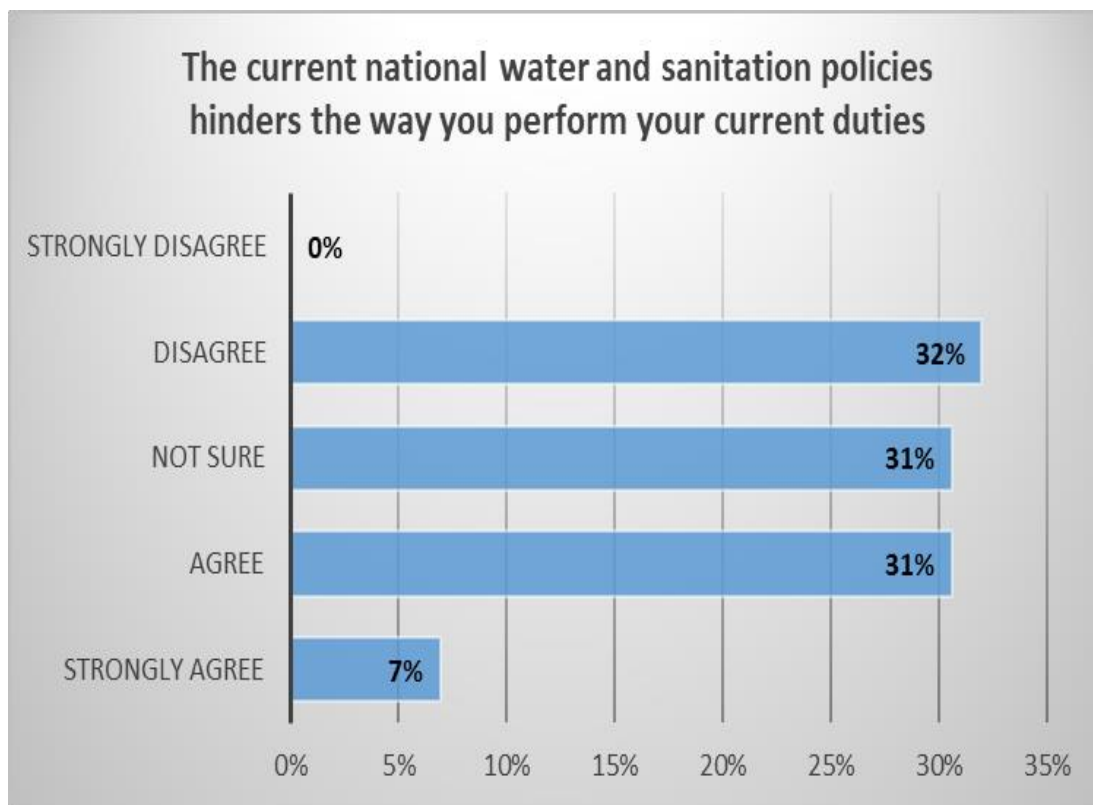
However, when it comes to survey questions, only 18% of respondents indicated that they have participated in at least one water and sanitation policy development process in the past. Other respondents also provided examples of those policies such as National Sanitation Policy 2016, National Water Resource Strategy 2 (NWRS2).

The respondents further acknowledged the importance of their participation in policy making process. This was reflected when they were given a statement "it is important for me to be involved in policy making process" and they were given choices from strongly agree, agree, not sure, disagree and strongly disagree. In their responses, about 28% strongly agree, 46% agree, 21% not sure, and 6% disagree, with 0% strongly disagree as depicted in figure 35 below.

Figure 35: Importance of involvement of respondents

It is important for me to be involved in policy making process

Response	Percentage
STRONGLY DISAGREE	0%
DISAGREE	6%
NOT SURE	21%
AGREE	46%
STRONGLY AGREE	28%
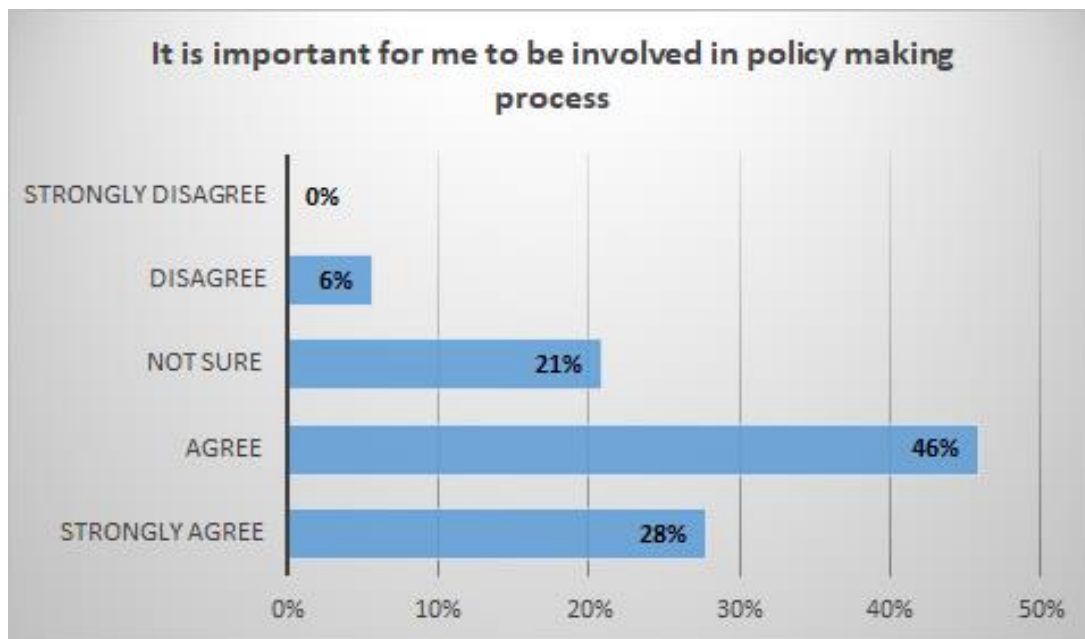
In relation to the process of policy formulation in the Department of Water and Sanitation, Water Services Authorities have a much important role to play. The responses from the Department presented mixed opinions in terms of trying to outline the exact role. Although opinions were mixed but there was consensus that Water Services Authorities should be leading the policy direction and also playing advisory role to the Department of Water and Sanitation by providing technical input into the policy process. Successful implementation of policies relies on their ability to understand and translate policy statements into actual services to the citizens. Their role becomes even more crucial in understanding the policy mischief.

At professional and technical level, there is proof of willingness to participate in policy making process from the side of eThekwini Municipality. There is also an indication that the respondents were quite confident that what they are currently doing now can immensely contribute to policy making. This was clearly demonstrated by their response to the statement of whether they would like to participate in national policy formulation process at the Department of Water and Sanitation. Their responses were, as reflected in figure 32, about 25% strongly agree, 50% agree, 19% not sure and only 6% strongly disagree.

eThekwini municipality showed much confidence on the capacity of the municipality to translate national policies into municipal bylaw and enforcement thereof. This emerged during interview with one of respondents when asked "in your opinion, that the water and sanitation

Unit has enough capacity to translate those national policies into bylaws, internal policies? Straight and direct response was "Yes, we do have capacity" (AH_WS, 2019). And the other confirmation from the other interviewee was "Yeah we do have professionals at all levels, and they are well positioned and capable of doing that" (PE_WS, 2019).

However, when it comes to survey responses from the same eThekwini Water and Sanitation Department, most respondents (57%) to the same question indicated that they were either in disagreement or not sure. Figure 28 indicated that about 13% disagree and 44% not sure. In addition, 31% and 13%, agree and strongly agree, respectively. The majority stated their reasons as: Lack of capacity within the unit. Most of the experienced professionals have already retired. The gap between the retired and the new incoming incumbents are large thus leading to in experienced professionals. Further, professionals from other disciplines are included into the water business (due to a shortage of water professionals) and thus don't have the required experience or knowledge of the water business. Institutional knowledge is important" (responses to question 31 of the survey questionnaire).

The municipality have submitted policy comments and submissions in the past. This was evident in survey responses where in other instances, respondents will even provide the name of policies in which they participated such as "Water use license, NWRS2, eThekwini Water Bylaws include reuse, policy on hydropower scheme" (Commentary response to question 25 of the survey questionnaire).

5.4 CHAPTER SUMMARY

In summary, this chapter presented the research findings as they were obtained from the interviews and survey conducted. The findings were categorized into seven themes to make it easier to present them. These themes were: Contextualization and understanding of public policy making in the Department of Water and Sanitation; Understanding what counts as evidence in evidence-based policy making; Bridging the gap between research and policy; Evidence integration to policy development and design in South Africa; Evidence collection for the purpose of policy development and design; Organisational capacity and contribution.

It brings to light a number of issues as far as public policy development and design in South Africa and in water and sanitation sector is concerned. The findings highlight that there is common and general understanding of what public policy making is all about in the sector.

There is common understanding of the multi-sectoral and messiness of the process within the sector. No clear understanding of the roles and responsibilities of each party in the process.

There is consensus on the importance of evidence and its use thereof in the policy making process. No common definition of what evidence is rather agreement that it is context-based. The data was rich in a sense that an evidence-based policy development and design model was also outlined in this chapter. This model advocate for the use of evidence in all levels and its continuous collection not only when the policy is being developed.

The next and last chapter six will be the overall conclusion and recommendations of the study. The chapter will provide brief reflection of the objectives, approach, structure and form this study took. It will provide direct findings per objective and reflect on whether the study managed to respond to the research question. This will then inform the recommendation of the new model of policy formulation which will integrates the evidence as mechanism to improve the process.

CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

6.1 INTRODUCTION

South Africa is classified as a developmental state. A developmental state is defined as a state that "brings about rapid and sustainable transformation in a country's economic and/or social conditions through active, intensive and effective intervention in the structural causes of economic or social underdevelopment…[It] constantly strive to improve the quality of what they do by building their own capacity and learning from experience. They also recognise the importance of building constructive relations with all sectors of society, while insulating themselves from capture by sectional interests" (NPC, 2011: 409).

Socio-economic development is currently on top of the country's developmental agenda. This is set out in its development blueprint document known as the National Development Plan with the time horizon up to 2030. If South Africa, the water and sanitation sector in particular, is serious about its developmental inspirations as set out in the NDP, must strengthen its investment in this new policy paradigm. It is safe to conclude that South African government has realised the importance of moving away from opinion to evidence-based policy decision making approach.

The preceding chapter presented and discussed findings of the study. This is the last and final chapter which provides the final and overall conclusion of the study. This chapter will be divided into two sections. The first section present conclusions made in relation to the objectives the study set out to achieve in chapter one. The primary objectives of this study were to examine the process of public policy making in the Department of Water and Sanitation. The study further intended to establish the extent to which evidence-based policy making is used in the water and sanitation sector in South Africa. It also set out to identify the methods used and consultation processes used to collect evidence for the purpose of policy development within the Department of Water and Sanitation. Importantly for this study was also to examine the level and nature of Water Services Authority involvement in the policy development process. The intention was to propose an alternative model to achieve evidence-based policy making process within the Department of Water and Sanitation.

The second section provides broad recommendations derived from the findings of this study. This section also includes the recommended evidence-based policy making process that can be

adopted by the Department of Water and Sanitation. This was the last and ultimate objective of this study.

6.2 CONCLUSION

The aim of this study was to investigate the extent in which evidence informs the implementation of water and sanitation policies in order to improve their implementation and achieve universal access to water and sanitation for all. The study interrogates the three key questions, namely: what is the process in place by the Department of Water and Sanitation to use experiential evidence emanating from Water Services Authorities? What is the extent of evidence use currently in policy making at the Department of Water and Sanitation? Is there a need for a new system or amendment to the existing?

This thesis is presented and structured in the following manner: Chapter one an overview of the study and outlined the background of the study, the problem statement, scope of the study, aims and objectives and key questions to be addressed in the study. The Chapter further provided reflections on the methodology adopted and the limitations of the study. explores existing literature on the public policy and public policy formulation process, and unpacks relevant theories underpinning them. The definition and analysis of concepts relevant to the study is also undertaken under this chapter. The Chapter further reflects on relevant case studies and highlights the key debates in relation to evidence-based policy making.

Chapter three reviewed public policy in the context of South Africa by providing an overview of the South African government configuration, the constitutional mandate at the national and local level, through the Department of Water and Sanitation, and the municipalities (through the Water Services Authorities) respectively. Chapter four explored methodological positions adopted by this study and reflects on the approach adopted for the analysis of data. Chapter five presented and discussed research findings in line with the study themes as they emerged in chapter two. Chapter six is therefore a reflection and retrospective account of what form and shade this study took and whether it managed to arrive at the intended objectives that were set out at inception.

The first objective of this study was to examine the process of public policy making in the Department of Water and Sanitation. The research results have revealed that the Department of Water and Sanitation uses the conventional policy development process and acknowledges

that it is a continuous, messy and multi-stakeholder process. The policy development process in the Department of Water and Sanitation is not yet institutionalized. This emerged when the Department confirmed that it does not have policy formulation framework or guidelines, and this is being currently developed. There is a fair understanding that policy making process is more about continuous stakeholder engagements. This was also confirmed by other two government institutions, i.e. Department of Cooperative Governance and Water Research Commission. However, these engagements seem to be limited to national level. This was revealed when eThekwini Municipality was unable to clearly articulate the policy making process in the Department of Water and Sanitation, and continuous engagements between the two institutions.

The second objective of this study was to establish the extent to which evidence-based policy making is used in the water and sanitation sector in South Africa. Like other institutions, the Department of Water and Sanitation claims that its policies are informed by evidence, but there is no proof to that effect. The research findings revealed that even the draft policy development protocol that is currently being developed by the Department of Water and Sanitation, does not outline how evidence will or should be incorporated. The Department of Water and Sanitation was unable to demonstrate how it integrates relevant evidence into its policy processes, especially policy implementation evaluation studies. As highlighted in objective one above, there is minimal engagement between eThekwini Municipality (as Water Services Authority) and Department of Water and Sanitation (as a regulator). The study revealed that there is multiplicity of evidence (in numbers and variations) in the sector that remains unutilized to make policy decisions.

The third objective of this study was to identify the methods used and consultation processes used to collect evidence for the purpose of policy development within the Department of Water and Sanitation. This study revealed that as part of evidence collection and stakeholder consultations, the Department of Water and Sanitation do engage sector departments at national level such as the Department of Cooperative Governance. The study revealed that the Department of Water and Sanitation only consult municipalities during general public participation process. The department does not accord municipalities the same status as other sector departments at national level. The Department of Water and Sanitation defines evidence as consisting of site visits, research reports, case studies and evaluation studies. The research findings revealed that there is limited engagement between the Department of Water and

Sanitation with other institutions that might be in position of much valuable evidence. The Department does not commission policy-specific research. No policy implementation evaluation studies are conducted by the Department of Water and Sanitation and Municipalities.

The fourth objective of this study was to examine the level and nature of Water Services Authority involvement in the policy development process. The research findings revealed that not all municipalities are involved in water and sanitation provision, only those that are classified by the Department of Cooperative Governance as Water Services Authorities. There is an acknowledgement from the Department of Water and Sanitation that those municipalities that are classified as Water Services Authorities have much bigger role to play in shaping the water and sanitation policy agenda. The history of participation in policy process from eThekwini metro can be summed as haphazard, messy and below average. This is confirmed by contradicting responses from the municipality itself. In order to improve the participation and contribution of the municipality, there is a need for communication and interaction to be strengthened. Findings revealed that there is much appetite from eThekwini Municipality to effectively and meaningfully participate in national policy processes.

The fifth and last objective of this study was to propose an alternative model to achieve evidence-based policy making process within the Department of Water and Sanitation. Overall findings of this study indicate that there is a need for a standardized and formal policy development framework for evidence-based policy development in the Department of Water and Sanitation. The framework that will provide guidance on how evidence can be integrated in a conventional policy making process. The framework that guides on different methods and means to appraise evidence and identifying evidence fit for purpose.

This is what the study has found as far as its research objectives are concerned. Based on these findings, it can now be concluded that the study has managed to arrive at its initially set study objectives. Based on the fifth objective as outlined above, it is now an appropriate moment to turn to the recommendations section and present the proposed evidence-based policy development framework as the way forward for the Department of Water and Sanitation in particular and South African Government in general.

6.3 RECOMMENDATIONS

Literature on policy development and design, not only in South Africa, but globally, reflects paradigm shift in the way is being carried out. The national Department of Water and Sanitation is the national government institution entrusted with such responsibility when it comes to managing and regulating the water and sanitation sector. This responsibility includes the development of mechanisms such as public policies to deliver on this mandate. All policies developed by the DWS supports the Departmental strategic objective of creating an enabling environment for the management of water resources and the provision of basic water and sanitation services across the sector. Prime to its challenges, is to ensure sustainable water use and sanitation provision, and balancing socio-economic needs of the country in terms of access to water.

The notion of evidence-based decision-making has, over the years gained prominence, especially in the post millennium era. Arguably, in most developing countries, decision making has been mostly based on opinion. This suggests that if developing countries wish to be part of the global village and serious about development, they must also catch up with this shift. South Africa is no exception. Post-apartheid South Africa has been characterised by redress and redistribution policy approaches. This means that policy decisions were taken to address the specific past socio-economic injustice. The water sector is also one of those sectors that are known for its past socio-economic imbalances in access and provision. In as early as 2010, South Africa, in its national diagnostic document, identified the need to move from this approach to an improved approach that is sustainable and responding directly to the problems and needs of the society.

South African government, through the National Development Plan vision 2030, has made commitment to invest in evidence-based approaches to policy and decision making. These investments come in a form of partnering with other institutions in building capacity amongst senior government officials on evidence-based approach. The evidence-based approach to decision-making seeks to ensure that implementation is successful. Too often decisions are taken and implemented, but the intended results are not met. Focusing on evidence when deciding ensures that development initiatives directly address identified societal problem. In this context, evidence-based decision-making approach is viewed as a viable mechanism to improve public decision making and ultimately improving its implementation.

The government has introduced two phased approach to institutionalising the evidence-based approach policy making in the public service since 2015. One arm focuses on building capacity at the leadership and/or executive level. This followed the pilot study that was conducted by Paine Cronin and Sadan (2015), on the attitudes of senior government officials on evidence use in public policy making. This capacity building is implemented through partnerships with the University of the Western Cape, the first training was offered in 2015, second round was in 2018. Having built capacity at the senior official level, Directors-General, Deputy Directors-General and Chief Directors, the next phase was to deal with the middle management.

Through the National School of Government, the DPME initiated a training programme for middle management. This training programme equip middle managers with technical skills on how to use a wide range of tools, sources and evidence instruments in order to make better policies and policy decisions. The training programme capacitates middle managers on how to identify and use relevant sources of evidence for purposes of supporting policy development and implementation. The programme is a problem-based learning and teaching method where it involves ongoing practical and problem-solving exercises. It is offered over a period of 5 consecutive days.

These capacity building interventions, for both senior management and middle management, unpacks the entire value chain of evidence-based approach to policy making. This involves, inter ilia, understanding what constitutes evidence, evidence synthesis, developing evidence informed policy options, theory of change analysis, understanding barriers to use evidence in policy development. Ultimately, these trainings implant new kind of thinking and approaches to policy development amongst government policy practitioners. The Department of Water and Sanitation is also partaking in these government wide programmes to institutionalise and build capacity on evidence-based policy and decision making.

The current process of developing policies in the department is understood as dependent on the nature of the policy being developed. However, the policy development process should strive to involve as many stakeholders as possible in order to benefit from their contributions (content, financial and human recourses) as well as gain their support for the process and implementation of the policy. The draft policy development protocol in the Department of Water and Sanitation makes a distinction between the development of what is referred to as National Strategic Policies and Departmental Operational Policies. Although the national strategic policy

development process does incorporate what is known as the Socio-Economic Impact Assessment System (SEIAS) but it is not explicit enough as evidence incorporation or consideration. However, there are views that the SEIAS allows policy practitioners to identify, synthesis and use evidence to inform policy decisions at those given stages.

Evidence-based policy making process suggests that evidence is an integral part of every step of the public policy formulation process. The findings indicate that there is enough evidence in the sector that remains unutilized to make policy decisions. Although official statistical data may be available to provide current status quo, trends as well as projections but that data remains meaningless if it is not converted into interventions. Capacity of practitioners must be brought forth. It is based on these findings and conclusions that this study proposes the policy making framework as shown in figure 36 below.

The recommended model was derived from the conventional policy development process. The only difference is the evidence integration aspect into the existing policy process. This model is sector specific, however, it can also be modified and customised to suit other South African government departments.

The model was developed with the acknowledgement that there are also several conventional policy development models which falls under the linear and cyclical policy development process. The model adopted the five-stage cyclical process model of conventional public policy making process and Department of Planning, Monitoring and Evaluation model of the policy cycle (DPME, 2014; Cloete, Wissink and de Coning, 2006; Banks, 2009; Dye, 2013; Howlett and Mukherjee, 2017; Dunn, 2018) as indicated in figure 36 below. This model is designed for the water and sanitation sector, however, it can be modified to suit other sectors of government.

Figure 36: Proposed Evidence-Based Policy Development and Design Model
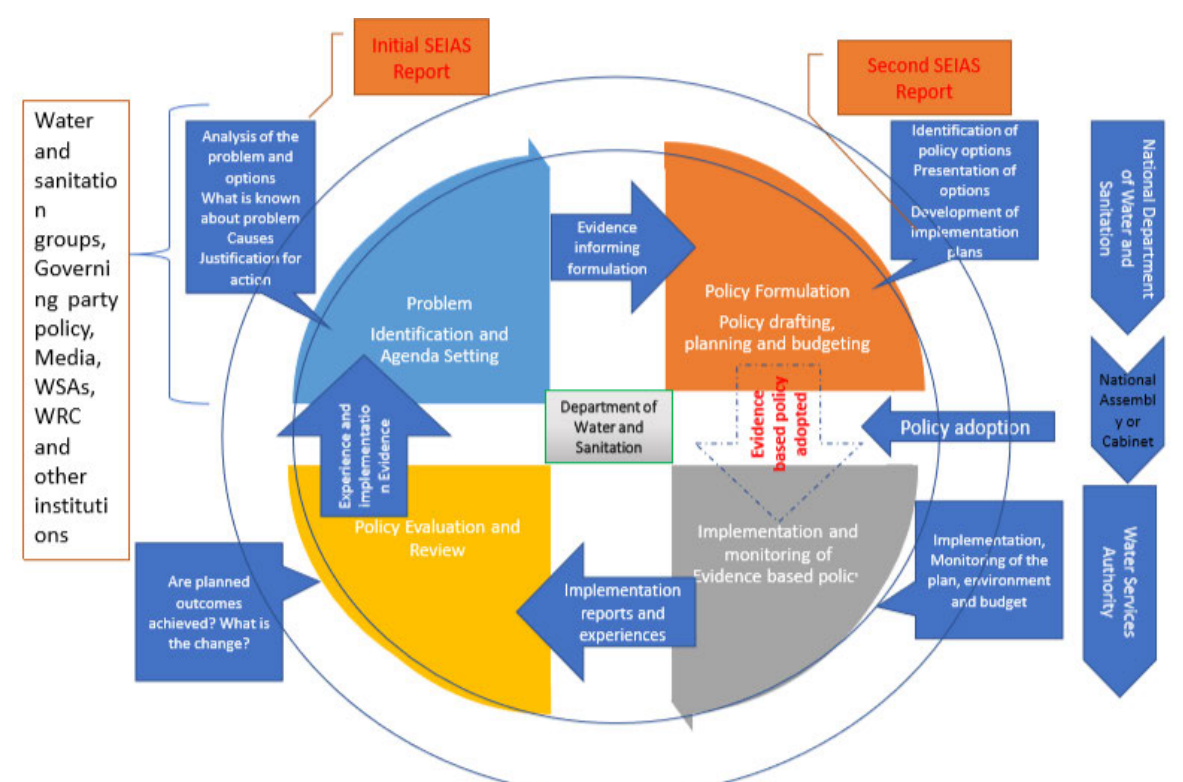
6.3.1 Problem Identification and Agenda Setting

In this proposed model, the Problem Identification and Agenda Setting represents the combination of two conventional public policy making process stages. Informed by the assertion from Lesia (2015) that the policy formulation is the process of collecting and analysing of information about a specific problem with the intention to formulate procedures to be followed to address it, this stage entails the adequate understanding and unpacking of the problem which will provide a scope for solutions and interventions required.

At this stage, stakeholders embark on a process of persuading each other based on what they believe should be a relevant solution or intervention. As illustrated in the figure above, the policy formulation process is viewed as cyclical and this as a first and continuation of the cycle. This was argued by du Plessis and Kotze (2017) that policy formulation process has many actors, stakeholders whom have vested interests or concerns which can be narrowed down in agenda setting. In setting the agenda, government plays a leading role in terms of prioritising the policy issues raised by actors and stakeholders based on the way each stakeholder managed to persuade the other.

In the case of water and sanitation sector, this is a crucial stage where Water Services Authorities (municipalities), Water Research Commissions, Water and Sanitation Interests groups, Media, Department of Cooperative Governance and Traditional Affairs, Department of Water and Sanitation undertake policy evaluations and assessment studies and any other evidence in order to understand and evaluate the extent of the problem. In addition, the Socio-Economic Impact Assessment Systems report assists the Department in deciding at which level of the agenda should the specific policy issue be placed. This however cannot ignore the criteria suggested by Cloete and Meyer (2006) on what informs the decision to place the policy issue at a specific level of the agenda. They argued that determining factors includes: power dynamics on who has the power to decide whether the problem is a public policy issue; the nature, scope, impact and intensity of the problem; the institution responsible for addressing the problem; is it attracting media attention or infringe human or any other rights; and whether consensus is reached on what is the problem to be addressed and means to address it.

6.3.2 Policy Formulation

Based on the information and knowledge generated and gathered in the Problem Identification and Agenda Setting stage of evidence-based policy making model, is regarded as evidence. In policy formulation stage is where the actual drafting of the policy objectives takes place. This is where various policy options proposals are being made by various stakeholders and actors based on their understanding of the policy problem and proposed interventions. All submissions are made to government technocrats (policy practitioners) at the Department of Water and Sanitation to assess and reassess while considering other factors such as resource, feasibility to implement, overall objective of government, etc. One of the tools that assist in undertaking this task, is the secondary Socio-Economic Impact Assessment System. Based on the outcomes of the SEIAS, the departmental policy practitioners can decide on a policy option that will adequately address the policy problem within reasonable and affordable means.

Juma and Onkware (2015) submits that this stage is about setting out the preferred policy option in a manner that will obtain approval. This model emphases that the outcomes of the SEIAS and subsequently the deciding the preferred policy option should be based on available evidence. Whether evidence was collected at the problem identification and agenda setting stage or it emerged during policy drafting stage, all evidence is crucial and should be integrated into the policy. This is again, a very crucial stage for Water Services Authorities to participate

for a variety of reasons. Firstly, they have a clear and practical knowledge of the context in which the preferred policy option will be implemented. Secondly, they have a contextual understanding of the problem to be resolved. Thirdly, it will be part of their capacity building for easy of translating policies into implementable actions. Fourthly, to allow them to clearly understand goals and objectives as well as developing implementation monitoring and evaluation frameworks.

This stage includes a very crucial process known as public or stakeholder consultation and participation. Before this process commences, the Department of Water and Sanitation and the recommended policy teams (including Water Service Authorities) should have reached consensus on what is the collectively preferred policy option. If the policy option is based on collective agreement informed by integrated evidence from these critical stakeholders, the general public is more likely to accept it. This will be beneficial for all parties in a sense that it will minimise time it takes to conclude and implement the policy. The goals, objectives and implementation plans will be understood by all. There will be much cooperation during implementation. Minimal implementation challenges as the problem was collectively understood and approved.

6.3.3 Policy Adoption

This is the stage where a decision is made on whether to go ahead and implement the policy or not. This is the stage whereby, in a case of national policy, policy recommendations made by policy practitioners are referred or presented before the National Assembly for approval. Evidence is also crucial at this stage because it ought to prove that the preferred option will address the policy mischief hence evidence-based decision making cannot be isolated from the evidence-based policy making process. There are quite a lot of policy decisions and choices involved in the policy making process and if those are informed by evidence, the entire process becomes evidence based.

The National Assembly has prerogative whether to adopt the proposal tabled or refer it back if is not satisfied with either the content or procedural issues of the policy. It is therefore prudent that the process is procedurally intense and sound. It is crucial that policy is based on synthesised evidence that presents fact about the situation and solutions thereof. At this stage is where proof of engaging various sources, stakeholders and actors needs to be presented. The

proof of engagements with stakeholders, how the entire process unfolded, the outcomes of the SEIAS reports - suffices as evidence before National Assembly.

6.3.4 Policy Implementation

This stage is about the actual application of the preferred policy option with the aim to realise and achieve the set policy objectives (Parsons, 1995). This is the stage where negotiations and decision-making take place. In the evidence-based policy making context, the process of negotiations and decision-making should be informed context-based evidence. In this model, this is where Water Services Authorities translate national policy provisions into bylaws that will enable them to deliver the actual service i.e. water and sanitation infrastructure and services. This becomes a challenge if Water Services Authorities were not part of the entire policy formulation process. Lester and Steward (2000) confirms this by asserting that, if implementers themselves buy-in and support the implementation, it tends to be much easier than in a case were implementers are in hostile with the preferred policy option. Involving Water Services Authorities in the policy formulation process also eliminate delays that should have been borne capacitating them on policy objectives.

During this stage, continuous interaction between Water Services Authorities and the national Department of Water and Sanitation is necessary for dealing with and mitigating any implementation challenges. Water Services Authorities, Water Research Commission and Department of Cooperative Governance and Traditional Affairs continuously monitors the performance of the policy and generate evidence in preparation for policy evaluation and review stage. This model considers evidence emanating from implementation of current policies as crucial in informing their reviews or future policies in the sector.

This stage becomes problematic if issues that relates to it were not raised during the development and design of the policy objectives. These issues include, inter alia, capacity of the implementer to implement – in this case, ability of Water Services Authority to develop bylaws, technical skills to setup the infrastructure needed, financing of the services, etc.

6.3.5 Policy Evaluation

This stage represents a period in the policy cycle where the custodian department takes a pause and reflect on the progress made in realising or achieving the set policy goals. Ile, Eresia-Eke and Allen-Ile (2012) simply put it as a stage that focuses on determining the extent to which

the policy outcomes have been attained. This is where the stakeholders regroup and begin the discussion about what was initially anticipated by implementing a particular policy. It is where all the reports (implementation reports, research reports, etc) are being scrutinised and synthesised for specific evidence to inform a decision whether to continue implementing the same policy, terminate, review or develop a new policy option.

Should the decision be to review or develop a new policy, the entire cycle will be repeated with the same steps, and possibly different option will be chosen as evidence would have indicated that the similar option does not solve the societal problem. Should the decision be to continue with implementation of the same policy, the implementation stage will be sustained for a longer period.

It is now widely accepted that policy making should be based on what evidence tells us is appropriate. This is simple and easy because no one would not want their policies to be informed by evidence. Evidence-based policy making should not be viewed as a mere staged process rather as one of the determinants that influences the policy outcomes.

Based on the arguments raised in the discussion above, it emerged that the integration of evidence into decision making does not take place outside of the conventional policy formulation process. The recommendations do not, in any way, suggest the replacement of the existing policy formulation models, rather supplements and enhance the models. In this model, evidence is considered in its entirety, different forms and source.

The aim of this study was to interrogate the evidence use in policy making process at the Department of Water and Sanitation. Central to this task was to understand the role of Water Services Authority in providing much needed evidence emanating from their policy implementation feedback. This thesis acknowledged the strides made in the efforts to address service delivery issues and to improve the lives of citizens. This is acknowledged more precisely in the policy space where big decisions with maximum impact has to be made with limited resources. The current interventions on improving decision making process in government is welcomed and commended. If the water and sanitation sector is serious about universal access to water and sanitation services and achieving Sustainable Development Goals, the following should be considered in relation to the way policy decisions are made:

- Precise and accurate understanding of its stakeholders in the water and sanitation value chain and capitalising on their role and contributions to make more informed decisions;

- Invest on strengthening partnerships at the policy development and design level;

- Build capacity in conjunction with its partners and stakeholders on evidence-based policy development, design and implementation. There is a need to understand policy process as a messy cyclical process with steps that are not isolated from each other;

- Water Services Authorities to appoint water and sanitation policy specialists to act as conduit between the WSA and the Department of Water and Sanitation on policy matters and serve on the DWS policy teams.

6.4 KEY CONSIDERATIONS FOR EFFECTIVE IMPLEMENTATION OF EVIDENCE-BASED POLICY DEVELOPMENT

This model emphasis on the need to synthesise evidence for purposes of policy development. It capitalises on the role of institutions like WRC as an information and knowledge generation and dissemination hub for the water and sanitation sector in general and Department of Water and Sanitation in particular. In performing this statutory function, it also generates and disseminate its research in a form of policy briefs. The policy briefs should be mandatory in all research conducted and this process should be one aspect of evidence synthesis.

This proposed model considers evidence as important driver in the process of policy decision making. This is informed by the premise that opinion-based policies have, over the years, proved to be ineffective. Secondly, different kinds of evidence are required in different stages of policy development process. Thirdly, the water and sanitation sector has enough existing evidence within the Water Research Commission and Water Services Authorities that can be used to inform policy decisions.

There are different kinds of methods and means of collecting policy-relevant evidence that exist in the sector. Amongst those are, on-going WRC funded research and initiative, real time data and information from institutions such as Water Services Authorities, Water Boards, sister departments and regular reports from Statistics South Africa.

This model recognises opportunities associated with the complexities of the institutional regimes within the sector. These institutions provide a solid platform for information, knowledge and experience sharing. Their involvement in various levels of the water and

sanitation value chain signifies the multitude of information that can be harnessed should their partnership and engagement be strengthened.

6.4.1 Understanding what count as Evidence in Evidence-Based Policy Making

Definition of what count as evidence is dependent on the researcher's assumptions, school of thought (Bouffard and Reid, 2012) and context based (Punton, Hagerman, Brown, Echt, Fisher, Lloyd, Morton and Vogel, 2016). For purposes of water and sanitation policy development and design, the Department of Water and Sanitation defined evidence as ranging from site visits, research reports, conducting case studies and evaluation research. This is not far off from the conclusions drawn by Marais and Matebesi (2012) when assessing the level of evidence-based decision making in respect of the development of Provincial Growth and Development Strategies (PGDSs) in South Africa. Marais and Matebesi (2012) concluded that, evidence can be 'official statistical data', 'official government policies', 'government research outputs', and 'scientific research from universities and non-governmental organizations'. This understanding excludes expert knowledge, stakeholder consultation, values and beliefs which this study considered as valuable evidence. In terms of understanding what is regarded as evidence in this context, this study conclude that evidence should be every kind of information and data that can be contextualized around the policy problem and be able to provide insight on the magnitude of the problem and assist in drawing appropriate policy interventions.

6.4.2 Bridging the gap between Research and Policy

It is widely acknowledged that there is a visible gap between the research world and policy world (Freiberg and Carson, 2010; Marais and Matebesi, 2012; Hammersley, 2005; Uzochukwu et al., 2016). There is a strong argument that there is a possibility to harmonise these streams into a seamless implementable process. Authors cite various reasons why this gap exists, such as lack of understating of benefits and opportunities associated with collaboration between the two worlds (Uzochukwu et al., 2016), research is easily labelled as irrelevant by policy makers (Marais and Matebesi, 2012). This study found that there is a significant amount of research knowledge that is being generated by research institutions, other government department and municipalities that remains unutilised for policy decision making purposes. This was confirmed by the Water Research Commission, Department of Cooperative Governance and Traditional Affairs and eThekwini Metropolitan Municipality.

This study therefore concludes that as a point of departure, the Department of Water and Sanitation can strengthen policy relations with sector institutions through establishment of policy teams. Find areas and means of collaboration with other research institutions as well as institutions of higher learning. These policy teams and partnerships will ensure that researchers understand the policy making process and policy makers understands the research world. It will allow stakeholders to contextualise and develop a long-term research agenda in support of policy development and design. The Department of Water and Sanitation must commission policy-specific research that are aimed at providing insight on a specific policy issue.

6.4.3 Evidence integration to policymaking

It emerged during data analysis that evidence integration is not just one step in policy making process but should be considered throughout the policy process (Cronin and Sadan, 2015). New and crucial evidence can emerge at any stage of the policy development process (Ile, Eresia-Eke and Allen-Ile, 2012; Howlett and Mukherjee, 2017). Marais and Matebesi (2012) correctly argued that until there is consensus on what is regarded as evidence in policy making process, evidence integration will remain a challenge. Policy makers would not know what to look for.

There is no existing tool that is used to verify if indeed evidence was used in a specific policy. The Department of Water and Sanitation claimed that by conducting a Socio-Economic Impact Assessment System (SEIAS) means that evidence is integrated into its policies. There are two contrasting views about the SEIAS that are expressed in the literature. On one hand, Howlett and Mukherjee (2017) understands SEIAS as a system is aimed at improving and modernising the public policy making process in order to ensure that it is systematically integrate evidence and expertise. While on the other, the Department of Planning, Monitoring and Evaluation, which is the custodian of SEIAS, understands it as a scientific process of ascertaining and assessing the risks associated with policy alternatives or choices and developing mitigation measures to address those risks should they arise during policy implementation.

This study concludes that, in addition to conducting the SEIAS, the Department of Water and Sanitation must, through policy teams and partners, engage on continuous evidence synthesis throughout the policy life cycle in order to ensure that new and emerging evidence is being integrated at all stages of the policy process.

6.4.4 Organizational capacity and individual skills

Case studies on evidence-based policy raised argument that studying the process alone without looking at the capacity and skills within the institutions is not enough (Marais and Matebesi, 2012; Young et al., 2014). Young et al., (2014: 587-588) emphases the importance of building organisational capacity and individual skills for successful adoption and implementation of evidence-based policy making. In the past, the emphasis has been on the process itself and neglected the capacity of institutions to carry out the process. This is crucial because evidence-based approach is aimed at improving organisational efficiencies and effectiveness in providing services (Head, 2015).

The issue of capacity must be addressed from both sides, policy makers and their stakeholders. The recommendation about establishing policy teams and partnerships will go a long in terms of capacitation. There is a need to strengthen the current capacity building interventions on evidence-based policy by the Department of Planning, Monitoring and Evaluation and its partnering institutions. Institutions of higher learning must also lead in producing "changed" policy practitioners that are conversant with the evidence-based practice.

6.5 SUGGESTIONS FOR FURTHER STUDIES

This study has provided insight on the process of policy development and design in the water and sanitation department. It further interrogated the extent of evidence use during that process. It recommended a viable evidence-based policy making process for the Department of Water and Sanitation as well as key considerations for successful implementation. The methodology used in the study effectively answered the broad questions as set out. Future research in this field should be undertaken as a government wide study that will culminate into developing the government framework on evidence-based policy development and design in South Africa.

The scope of this study was only limited to interrogating the concept of evidence-based policy making in the national Department of Water and Sanitation. It is recommended that future researches should also look at emerging and other related phenomenon like evidence-informed policy making and how is it different or similar to evidence-based policy making paradigms.

6.6 THE IMPACT OF COVID-19 ON CURRENT WATER AND SANITATION POLICY IMPLEMENTATION: EVIDENCE-BASED ANALYSIS

The first case of the COVID-19 was reported in South Africa by the National Institute for Communicable Disease (NICD) on 5 March 2020. In response, in terms of the National Disaster Management Act, 2000, His Excellency, President Cyril Ramaphosa declared the coronavirus pandemic a national disaster which was accompanied by a national lockdown and a package of extraordinary measures to combat this public health emergency. Although this study did not intend to study evidence-based in the time of pandemic but reflecting on its impact in this study and public policy in general is as unavoidable reality. Therefore, this section provides a brief reflection and implications for the water and sanitation sector going forward.

Focusing on evidence when making a decision ensures that development initiatives directly address identified societal problem. During the outbreak of the novel coronavirus (COVID-19), evidence emanating from other countries like China, showed that stringent hygiene practices is one of the most effective measures to prevent the spread of the pandemic. To successfully practice hygiene, access to basic clean water and sanitation is a prerequisite. Water is regarded as social, environmental and economic good (DWS, 2013). Water plays a supportive role to various sectors such as education, health, agriculture, just to name the few. It is a well-known fact that during any pandemic, health is the leading sector. Water plays a supportive role. It is for this reason that water policies should be crafted in a manner that they adaptive and resilient to disasters while pragmatic in their response.

Making policies is a complex and risky process. Policy makers cannot predict for sure all the consequences of policies they develop (Cairney and Geyer, 2017). South Africa is amongst countries that still struggles with provision of water and sanitation services to all citizens. It is for this reason that to effectively implement the WASH as preventative measure, the Department of Water and Sanitation put forward a number of urgent interventions. Amongst them, establishment of Water and Sanitation Command Centre; provision of water through distribution of community water tanks; coordinate the provision of water and sanitation at the national Command Centre; provision of more financial resources to municipalities to ensure continued and sustainable provision of water.

One of the targets (target 6.1) of the Sustainable Development Goal 6 (water and sanitation) is aimed at achieving access to safe and affordable drinking water for all. It recognizes that water

is life (United Nations, 2018:11). Water is life because it acts as a catalyst in attainment of other basic necessities of life such as environment, economy, health, to name the few. Target 6.2 aimed at achieving access to sanitation and hygiene. The Sustainable Development Goal 6 Synthesis Report on Water and Sanitation (2018) by the United Nations, indicates that globally 844 million people (11%) still lack access to basic water services while 2.3 billion people (32%) still lack access to basic sanitation services (UN, 2018: 11-13).

Provision of safe water, sanitation and good hygiene practices have a critical role to play in the reduction of diseases. Globally, improving water, sanitation and hygiene (WASH) has the potential to deter at least 9.1% of the disease burden and of the total burden of ill-health preventable by improvements in WASH (World Health Organization, 2015). Hand washing with soap at critical times, especially before eating and after contact with excreta, can reduce diarrhoeal disease by up to 47%, the prevalence of eye infections like trachoma and conjunctivitis by approximately 45%, and respiratory infections by about 20%. Good hygiene practices can also reduce the prevalence of respiratory infections (Water Aid, 2012)

Despite early gains in the provision of water, provision slowed down notably after 2014 with percentage of households with access to an improved source of water only increased by less than five percentage points between 2002 and 2018 (growing from 84,4% to 89,0%), whilst Access to improved sanitation seems to have stagnated at around 80%, and the last 20% seem to be hardest to achieve (StatsSA, 2019). With the latest statistics indicating that 11 % of households remains without access to water in the country. South Africa is still battling with supply of sufficient clear portable water for all its citizens, especially in informal settlements and rural areas. The typical example is the case of Maluti-A-Phofung Municipality, in QwaQwa, Free State, has been battling water shortages for over a decade. Residents embarked on violent protests, demanding constant water supply (SABCNews, Feb 2020).

The Minister of Water and Sanitation made commitment that 5 000 water tankers will be distributed in the area as a short-term intervention but by the beginning of lockdown regulations on 26 March 2020, the Department has not delivered on its promise (City Press, March 2020). In eThekwini Metropolitan municipality area, more than 20 000 households without access to clean portable water (IDP, 2019/20). In order to effectively apply the regulations and ensure that communities comply to the basic standards of hygiene as a preventative measure, president made the commitment that "Emergency water supplies – using water storage tanks, water

tankers, boreholes and communal standpipes – are being provided to informal settlements and rural areas."

Despite acknowledging that there are communities that remain without access to basic service of water supply and sanitation, it is crucial to unpack this in relation to the impact it has on their health and well-being. Water is a crucial contributor to building healthy communities. Access to safe water is beneficial for the health of communities in terms of its use for drinking, cooking and washing. Sanitation services is understood not only as referring to the sanitation facility and waste but broadly as "the provision of a basic sanitation facility which is environmentally sustainable, easily accessible to a household and a consumer, the sustainable operation and maintenance of the facility, including the safe removal of human waste, grey-water and wastewater from the premises where this is appropriate and necessary, and the communication and local monitoring of good sanitation, hygiene and related practices" (National Sanitation Policy, 2016). It also includes the hygiene component which is defined as "Personal and household practices that serve to prevent infection and keep people and environments clean. The conditions and practices that help to maintain health and prevent the spread of diseases" (National Sanitation Policy, 2016).

His Excellency, President Cyril Ramaphosa addressed the nation on the 23rd of March 2020. In his address he declared the coronavirus pandemic a national disaster in terms of the National Disaster Management Act, 2000, and announced a package of extraordinary measures to combat this public health emergency. At the time, there were 402 confirmed COVID-19 cases in South Africa. These measures were implemented through the introduction of regulations as required by the National Disaster Management Act. As the most effective preventative measure, people are required to keep up to basic hygiene behaviors. This was the lessons learned from the city of Wuhan, in China. Hygienic behaviors includes frequently washing hands with clean water and soap at least for 20 seconds.

In response to the pandemic and taking lessons learned from China, it was indeed evident that stringent hygiene practices is one of the proven preventative measures in dealing with the spread of the pandemic (WHO, 2020; Presidency, 2020). In its policy response, through the issuing of lockdown regulations, South Africa advocated for stringent hygiene practices with included washing of hands with water and soap. For this intervention to be possible, everyone must have access to basic clean portable water.

Based on the need for a rapid response to the pandemic, the Water and Sanitation COVID-19 Command Centre was established and was based at Rand Water in Johannesburg. The Minister responsible for water and sanitation was tasked by the president to ensure that "there is water for all communities in order to flatten the curve and to stop the spread of the virus" (The Presidency, media statement, 7 April 2020). This current coronavirus epidemic provides great lessons and opportunity to review current government processes and systems with regards to provision of clean portable water and good hygiene practices.

Amongst the lessons, for the national Department of Water and Sanitation is to centralize the construction, procurement, operation and provision of water to various communities in various municipalities; Strengthen the horizontal intergovernmental relations; Adjust current business operations and bylaws by municipalities to ensure the national intervention at the provision level. For comprehensive response, the DWS will also deal with the issue of communal taps to ensure social distancing and ease of access in cases of self-quarantine. It is undeniable that Pandemic such as Covid-19 brought about complexity.

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LIST OF APPENDICES

APPENDIX A

**UNIVERSITY OF ™
KWAZULU-NATAL**

**INYUVESI
YAKWAZULU-NATALI**

09 September 2019

Mr Sibusiso Lungisani Xaba (204001526)
School of Social Sciences
Howard College Campus

Dear Mr Xaba,

Protocol reference number: HSS/0570/019D
Project title: Evidence based policy making as the alternative for effective water policy design and development: A case study of eThekwini Metropolitan Municipality

Approval Notification – Expedited Application

In response to your application received on 07 May 2019, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number. PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 1 year from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours

....
Dr Rosemary Sibanda (Chair)

/ms

Cc Supervisor: Dr Cheryl Mohamed-Sayeed
cc Academic Leader Research: Professor Maheshvari Naidu
cc School Administrator: Ms Nonhlanhla Radebe

APPENDIX B

Pod 1, Second Floor, Intuthuko Junction, 750 Mary Thipha Street, Umkhumbane, Cato Manor, Durban 4001.
Tel: 031 322 4513, Fax: 031 261 3405, Fax to email: 086 265 7150, Email: mile@durban.gov.za, Website:
www.mile.org.za

For attention:
Chair of Ethics Committee
College of Humanities
School of Social Science
University of KwaZulu Natal
Howard Campus
Durban
4001

2 April 2019

RE: LETTER OF SUPPORT TO S.L XABA, STUDENT NUMBER 204001526 - GRANTING PERMISSION TO USE
ETHEKWINI MUNICIPALITY AS A CASE STUDY

The Research and Policy Advocacy Unit and eThekwini Municipal Academy (EMA), have considered a request from
Mr Sibusiso Lungisani Xaba to use eThekwini Municipality as a research study site leading to the awarding of a
Doctoral degree. The dissertation title is noted as "Evidence-based policy as the alternative for effective water
policy design and development. A Case Study of eThekwini Metropolitan Municipality."

We wish to inform you of the acceptance of his request and hereby assure him of our utmost cooperation towards
achieving his academic goals; the outcome which we believe will help our municipality improve on its service
delivery outcome. The student his reminded of the ethical considerations when undertaking this study. In return,
we stipulate as conditional that Mr Xaba contacts Collin Pilley, Program Manager at MILE
(collin.pilley3@durban.gov.za) to present the results and recommendations of this study to the related unit/s on
completion of her research study, accompanied by his academic supervisor.

Wishing Mr Xaba all the best in his studies.

Dr S. Mbatha
Sen. Manager: RAPA
eThekwini Municipality

Dr M. Ngubane
Head: eThekwini Municipal Academy
eThekwini Municipality

I SIBUSISO XABA hereby accept as conditional that I will comply fully as
per the conditions stipulated above.

Signed: _____ Date: 08/04/2019

APPENDIX C

water & sanitation
Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA

Private Bag X313, Pretoria 0001 / Sedibeng Building, 185 Francis Baard Street, Pretoria
Tel: 012 336 7500 / Fax: 012 323 4470 or 012 326 2716

Enquiries: Mr S Ndlovu   Telephone: 012 336 6515   Reference: 21/9/P

For attention:
Mr Sibusiso Xaba
College of Humanities
School of Social Science
University of KwaZulu Natal
Howard Campus
Durban
4001

Dear Mr. Xaba

RE: REQUEST TO INTERVIEW OFFICIALS FROM CHIEF DIRECTORATE: WATER POLICY FOR PHD RESEARCH PROJECT

Your letter dated 10 May 2019, refers.

My department has noted that you intend to conduct research entitled: *"Evidence-based policy as the alternative for effective water policy design and development. A Case Study of eThekwini Metropolitan Municipality."* The department would like to thank you for considering the water and sanitation sector as your area of interest. I have considered your request to interview officials from Chief Directorate: Water Policy as part of your study.

The Department hereby assures you of our utmost cooperation and support during the course of your project. The permission is effectively granted with the following conditions:

- The results and recommendations of this study are shared with the relevant branch in the presence of your academic supervisor upon completion prior to publication/ submitted to academic institution.

- You note that the department cannot share sensitive information such as emails, agendas, faxes or any other information that the department's deems as confidential. The only information that the Department can assist you with is information that is available for public consumption such as: policy documents, published studies, media statements, ministerial speeches and discussion papers which are already available on the internet.

- Note that access to identified official will be is dependent on their willingness and consent, so thereof you are also encouraged to draft consent forms to be circulated to the officials that you have selected to form part of the study so as to inform them about the study purpose, the procedures, the risks and benefits of the study, as well as to confirm their willingness to participate in the study.

- You comply with stipulated/applicable ethical considerations when undertaking the study

For further arrangements, kindly contact Ms. Mashiane Ella, Telephone: 012 336 8836 Cell: 082 462 3307 and Email: MashaineM@dws.gov.za who will assist in distribution of consent forms to be circulated to the officials and formulating engagement schedule/timetable with identified position/personnel within the Chief Director: Water Policy

The Department of Water and Sanitation would like to wish you all the best in your endeavor to complete your Doctor of Philosophy Studies and your future contribution to the sector.

Yours sincerely

Director Policy
Date: 24. 05. 2019

Applicant Accept/ Not Accepted

I.. hereby accept conditional that I will comply fully as per conditions stipulated above.

Signed..   Date...

APPENDIX D
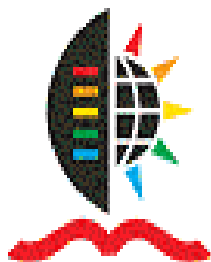
UNIVERSITY OF KWAZULU-NATAL
Public Governance

PhD Research Project

Researcher: Mr Sibusiso Lungisani Xaba

Supervisor: Dr Cheryl Mohamed-Sayeed

UKZN Humanities and Social Science Research Ethics Office:

Dear Participant,

I am **Sibusiso Lungisani Xaba** (*204001526*), a PhD candidate studying at the University of KwaZulu-Natal, Howard College Campus. The title of my research is: **Evidence based policy making as the alternative for effective water policy design and development: A Case Study of eThekwini Metropolitan Municipality**

The aim of the study is to investigate *to what extent should experiential evidence from Water Services Authorities (WSAs) be used to inform water and sanitation policies in order to improve their implementation and achieve universal access to water and sanitation for all?* I am interested in interviewing you so as to share your experiences, observations and knowledge on the subject matter.

Please note that:

- The information that you provide will be used for scholarly research only.
- Your participation is entirely voluntary. You have a choice to participate, not to participate or stop participating in the research. It is entirely voluntary and your decision at any point will be accepted and respected.
- Your views in this interview will be presented anonymously. Neither your name nor identity will be disclosed in any form in the study.
- The interview will take about 30 minutes.
- The record as well as other items associated with the interview will be held in a password-protected file accessible only by myself and my supervisors. After a period of 5years, in line with the rules of the university, it will be disposed by shredding and burning.
- If you agree to participate, please sign the declaration attached to this statement (will be printed at the back of this letter).

I can be contacted at: School of Social Sciences, University of KwaZulu-Natal,

Howard College Campus, Durban. Email: Sibusiso.Xaba@durban.gov.za ; Cell: 0824083617. My supervisor is **Dr Cheryl Mohamed-Syeed** who is located at the School of Social Sciences, Howard College Campus, Durban of the University of KwaZulu-Natal. Email: mohamed-sayeedc@ukzn.ac.za Phone number: +2731 260 1583.

Thank you for your contribution to this research.

Signed……………………………………Date …………………………………………..

DECLARATION

I………………………………………………………………………… (*full names of participant*) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project.

I understand that I am at liberty to withdraw from the project at any time, should I so desire. I understand the intention of the research. I hereby agree to participate.

I consent / do not consent to have this interview recorded (if applicable)

SIGNATURE OF PARTICIPANT   DATE

…………………………………………………………………………………………

INTERVIEW QUESTIONS
LOCAL GOVERNMENT (ETHEKWINI MUNICIPALITY)

1. Do you know which national department is responsible for regulating provision of water and sanitation?
2. What do you understand by policy formulation process within the Department of Water and Sanitation?
3. Since Local government is responsible for implementation of water and sanitation policies, in your view, what role should your municipality play before, during and after policy formulation process by the Department of Water and Sanitation?
4. Does the municipality participate in water and sanitation policy making process by the Department of Water and Sanitation? If so, how does the municipality participates?
5. At what stage of policy making process does the municipality normally participate?
6. How does the municipality ensure that its participation influences and shapes policy outcomes?
7. Should you be invited to participate in policy making process by the DWS, would you participate? And what do you think would be your role?
8. In your understanding, what would you regard as evidence in water and sanitation policy making process?
9. In your understanding, what is the importance of evidence during policy formulation process?
10. In your opinion, does research alone provides sufficient evidence for policy decision making?
11. According to your understanding, how is this policy formulation process is being carried out in the Department of Water and Sanitation?
12. Did/do you take part in the policy formulation process within the Department of Water and Sanitation? If yes, how?
13. What do you think should be the role of Water Services Authorities like eThekwini in water and sanitation policy development process?
14. What would you say are implementation challenges of the current water and sanitation policies?
15. In your opinion, do you think the Unit has sufficient capacity to translate water and sanitation policies into implementable actions in a form of bylaws, etc?
16. Does the municipality provide policy implementation feedback to the Department of Water and Sanitation?
17. In your opinion, do you think that the DWS uses evidence to justify decisions already taken or uses evidence to inform decisions to be taken?
18. Have you ever heard of evidence-based policy making as an alternative to make better policy decisions? If yes, do you know how it works?
19. Do you think evidence-based policy making will offer viable policy making alternative?
20. Is there anything you would like to share with me that relates to policy formulation process in the Department of Water and Sanitation or role of local government in policy formulation process by national sphere of government which I did not cover?

DEPARTMENT OF WATER AND SANITATION (DWS)

1. What is your understanding on the public policy making process?
2. As an employee of the DWS, how are you personally involved in the policy making process?
3. Are there any documents that the DWS uses as guidelines for water and sanitation policy making process? If yes, what are they?
4. What informs the decision whether to develop or not to develop policies in the department?
5. Can you tell me one policy that you were involved in its development and what did you do specifically?
6. In your experience, how does the Department involve municipalities in general in the policy making process? And at what stage of policy formulation are they involved?
7. Does the Department undertake stakeholder analysis process when developing policies?
8. Does the Department consider municipalities as its critical/strategic stakeholder and tell me how was that decided?
9. What specific role does the Water Services Authorities play in the policy making process?
10. In your view, do you think it's the Department's responsibility to ensure participation of Water Services Authorities in the policy making process?
11. In your understanding, what is regarded as evidence in public policy making process?
12. In your view, what is the importance of evidence during policy making process?
13. At what stage of policy making do you think evidence should be considered and how?
14. Do you think research alone provides sufficient evidence for policy decision making?
15. Can you tell me of one example of effective or ineffective evidence use in policy making and briefly outline where in the policy cycle evidence was used, how it was used and who used it and how this correlated with policy implementation and outcomes?
16. Does the Department have a uniform and standard requirement for the use of evidence in policy making process using best practice?
17. What do you think should be/is the Department's main sources of evidence (if at all there are any)?
18. Does the Department conduct policy evaluation studies? If so, for what purpose?
19. Does the Department use evidence to support decisions already taken or use evidence to take decisions?
20. Have you ever heard of evidence-based policy making as an alternative to make better policy decisions?
21. In your opinion, do you think evidence-based policy making will offer viable policy making alternative?
22. In your view, what can you highlight as current challenges or areas of improvement in a manner in which the Department of Water and Sanitation formulates policies?
23. Is there anything you would like to share with me which relates to the policy formulation process in the department or the role of Water Services Authorities in policy formulation in the Department?

DEPARTMENT OF COOPERATIVE GOVERNANCE (DCOG)

1. Do you engage the Department of Water and Sanitation at the policy level? If so, what do you understand by policy making process within the Department of Water and Sanitation?

2. Are you (as DCOG) involved in any way in policy making process at the Department of Water and Sanitation?

3. At what stage of policy development process does the DCOG get involved?

4. What role does the DCOG plays during policy making process?

5. How do you ensure that your involvement addresses challenges and influences the policy outcome?

6. What do you understand to be "evidence" in policy making process?

7. What is the importance of evidence during policy making process?

8. Are there any platforms/channels of continuous engagements with the DWS or only engage during the policy making process?

9. According to your understanding of the mandate of the Department of Water and Sanitation, how does the Department ensure your participation as a stakeholder in its policy making process?

10. According to your knowledge, does Water Services Authorities (municipalities) participate in the policy making process? If yes, how do they participate? If no, why not?

11. As a Department responsible for local government, how do you think the role of municipalities can be strengthen specifically in influencing and shaping water and sanitation policies?

12. In your view, do you think the department's decisions regarding its policy positions reflect the interests and issues emanating from actual service delivery at the municipal level? If not, how can this be improved?

13. In your opinion, do you think the DWS should change the current policy development process in order to improve WSAs participation in water and sanitation policy making process?

14. In your opinion, do you think that evidence-based policy making will offer viable alternative for improved policy implementation by WSAs?

WATER RESEARCH COMMISSION (WRC)

1. What do you understand by policy making process within the Department of Water and Sanitation?

2. Are you (as WRC) involved in any way in policy making within the Department of Water and Sanitation?

3. At what stage of policy development process does the WRC get involved?

4. What is the role of Water Research Commission in the policy making process?

5. What do you understand to be "evidence" in policy making process?

6. What is the importance of evidence in policy making?

7. How does your research output shape the policy making process in the Department?

8. Do you think research alone provides sufficient evidence for policy decision making?

9. Are there any platforms of continuous engagements between the WRC and DWS or only engage during the policy making process?

10. According to your understanding of the mandate of the Department of Water and Sanitation, how does the Department ensure participation of its stakeholders in its policy making process?

11. According to your knowledge, does Water Services Authorities (municipalities) participate in the policy making process? If yes, how do they participate?

12. In your view, how do you think the WRC's role should be strengthen specifically in influencing and shaping water and sanitation policies through its research output?

13. In your view, do you think the Department's decisions regarding its policy positions reflect the research recommendations and addresses challenges identified by research outputs?

14. In your opinion, do you think that evidence use during policy making helps to improve policy implementation?

15. In your opinion, do you think the current policy making process at the DWS needs improvements? If so, how?

16. In your opinion, do you think evidence-based policy making will offer viable policy making alternative?

17. Is there anything you would like to share with me that relates to policy making process in the Department of Water and Sanitation which I did not cover?

EXECUTIVE DIRECTOR: PEGASYS

1. What is the mandate or founding principles of your organisation?
2. What is your understanding of policy formulation process within the Department of Water and Sanitation?
3. Have you ever participated in the policy formulation process within the Department of Water and Sanitation? If so, when? Which policy? And at what stage of policy formulation you participated?
4. What role did/do you play in the policy formulation process?
5. How your contribution influenced the policy formulation process and policy outcome?
6. How long have you been participating in policy making process in the Department of Water and Sanitation?
7. What is your overall opinion of the manner in which the policy formulation process carried out in the Department of Water and Sanitation?
8. Do you think the current process requires improvements?
9. Since local government is responsible for policy implementation, what do you think should be the role of local government before, during and after policy development process?
10. In your understanding, what is regarded as evidence in/during public policy making process?
11. In your understanding, what is the importance of evidence during policy formulation process?
12. In your opinion, do you think research alone provides sufficient evidence for policy decision making?
13. Do you think use of evidence during policy making improves policy implementation?
14. Are you aware of any current policy implementation challenges, if so, how do you suggest should be addressed?
15. How do you think the DWS can improve the participation of WSAs in policy making process?
16. In your view, do you think evidence-based policy making provides a viable alternative for improved policy making and implementation?
17. Is there anything you would like to share with me that relates to policy formulation process in the Department of Water and Sanitation which I did not cover?

APPENDIX E
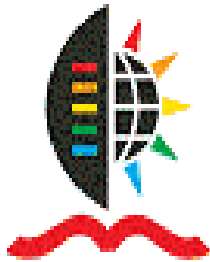
UNIVERSITY OF KWAZULU-NATAL
Public Governance

PhD Research Project
Researcher: Mr Sibusiso Lungisani Xaba
Supervisor: Dr Cheryl Mohamed-Sayeed
UKZN Humanities and Social Science Research Ethics Office:

Dear Respondent,

My name is **Sibusiso Lungisani Xaba** (*204001526*). I am a PhD candidate studying at the University of KwaZulu-Natal, Howard College Campus. The title of my research is: **Evidence based policy making as the alternative for effective water policy design and development: A Case Study of eThekwini Metropolitan Municipality**. The aim of the study is to investigate the extent in which evidence from Water Services Authorities (WSAs) is used to inform water and sanitation policies in order to improve their implementation and achieve universal access to water and sanitation for all. I am interested in interviewing you so as to share your experiences, observations and knowledge on the subject matter. The questionnaire will take approximately 15 minutes to complete.

Please note that:
- The information that you provide will be used for scholarly research only.
- Your participation is entirely voluntary. You have a choice to participate, not to participate or stop participating in the research. You will not be penalized for taking such an action.
- Your views in this interview will be presented anonymously. Neither your name nor identity will be disclosed in any form in the study.
- The questionnaire will take about 15 minutes.
- The record as well as other items associated with the interview will be held in a password-protected file accessible only to myself and my supervisors. After a period of 5 years, in line with the rules of the university, it will be disposed by shredding and burning.
- If you agree to participate please sign the declaration attached to this statement

`.

Thank you for your contribution to this research.
Signed…………………………………………Date …………………………………………..

DECLARATION

I…………………………………………………………………… (*full names of participant*) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project.

I understand that I am at liberty to withdraw from the project at any time, should I so desire. I understand the intention of the research. I hereby agree to participate.

I consent / do not consent to have this interview recorded (if applicable)

SIGNATURE OF PARTICIPANT   DATE

……………………………………………………………………………………………………….

SECTION A – BIOGRAPHICAL DATA (please place an X in the correct column)

1. Age Group

18 – 29	1
30 - 49	2
50 – 59	3
60 and above	4

2. Gender

Male	1
Female	2

3. Level of Education

Undergraduate	1
Graduate	2
Postgraduate	3
Other	4

4. How long have you been employed within the Department?

0 – 5 years	1
5 – 10 years	2
More than 10 years	3

5. How long have you been responsible for policy implementation?

0 – 5 years	1
5 – 10 years	2
More than 10 years	3

6. What category are you employed?

Professional	1
Senior management	2
Other	3

SECTION B:
These questions should be answered from your own opinion. Please place an X in the correct column.

7. I have a working knowledge of the procedures that are followed by the National Department of Water and Sanitation when developing water and sanitation policies?

Yes	1
Not sure	2
No	3
I do not know anything about the procedures	4

8. Are you familiar with who is responsible for water and sanitation policy making in South Africa?

Yes	1
Not sure	2
No	3
I do not know anything about who is responsible.	4

9. Are you familiar with who has the decision-making power to make and/ or change water and sanitation policy in South Africa?

Yes	1
Not sure	2
No	3
I do not know anything about who has the decision-making power.	4

10. In your opinion what is the situation of water and sanitation policy making in eThekwini?

Very effective	1
Effective	2
Not sure	3
Poor	4
Very poor	5

11. Do you think evidence is important in policy making?

Strongly Agree	Agree	Not sure	Disagree	Strongly Disagree
1	2	3	4	5

12. Which of the following you think should constitute evidence in policy making?

Expert knowledge	1
Stakeholder consultation	2
Previous evaluations	3
Published research	4
Values and beliefs	5
All of the above	6
I do not know	7

13. Do you consider research as important evidence in the policy development process?

Strongly Agree	Agree	Not sure	Disagree	Strongly Disagree
1	2	3	4	5

14. Undertaking research is part of my current responsibilities

Strongly Agree	Agree	Not sure	Disagree	Strongly Disagree
1	2	3	4	5

15. How often do you undertake those researches?

Once per month	1
Every couple of months	2
Once per year	3
Never	4
No response	5

16. What happens to the research reports once research is finalised?

Submit to Water Research Commission	1
Submit to Department of Water and Sanitation	2
Submit to executive and Council	3
I keep them	4
No response	5

17. Do you think you need training on conducting policy research?

Strongly Agree	Agree	Not sure	Disagree	Strongly Disagree
1	2	3	4	5

18. Do you think the current policy formulating process is informed by evidence?

Strongly Agree	Agree	Not sure	Disagree	Strongly Disagree
1	2	3	4	5

SECTION C:

These questions should be answered from your own experience and knowledge in eThekwini Municipality. Please place an X in the correct column.

19. Do you know stakeholders that participates in water and sanitation policy making process at national level?

Yes	1
Not sure	2
No	3
Other. Please specify.	4

20. Have you ever attended a policy consultation session or workshop organised by the National Department of Water and Sanitation?

Yes	1
No	2

21. Would you like to participate in the national water and sanitation policy making process?

Strongly Agree	Agree	Not sure	Disagree	Strongly Disagree
1	2	3	4	5

22. Does the Unit conducts policy evaluation in order to contribute to future policy reviews?

Strongly Agree	Agree	Not sure	Disagree	Strongly Disagree
1	2	3	4	5

23. How often do you receive information from the National Department of Water and Sanitation?

Once every week	1
At least once per month	2
At least once per year	3
I have never received information from….	4

24. How often do you send information to the National Department of Water and Sanitation?

Once every week	1
At least once per month	2
At least once per year	3
I have never sent information to….	4

SECTION D:

These questions relate to your involvement and contribution to national water and sanitation policy development process. Please place an X in the correct column.

25. Have you ever made any submissions (verbal or written) to any draft water and sanitation policies?

Yes	1
No	2

If yes, give one policy?...

26. In what form did you make your submission?

Formal written submission	1
Verbal account	2
Research reports	3
Other. Please specify.	4

27. The information I submit to the National Department of Water and Sanitation can be useful in making policy decision?

Strongly Agree	Agree	Not sure	Disagree	Strongly Disagree
1	2	3	4	5

28. Would you like to participate in the national water and sanitation policy making process?

Strongly Agree	Agree	Not sure	Disagree	Strongly Disagree
1	2	3	4	5

If yes, what do you think should be your role?..

29. It is important for me to be involved in policy making process

Strongly Agree	Agree	Not sure	Disagree	Strongly Disagree
1	2	3	4	5

30. What are the implementation challenges do you experience with current water and sanitation policies?

Translating policies into bylaws	1
Policy provisions are too rigid	2
Lack of relevant skills set to implement	3
Other. Please specify.	4

31. The Water and Sanitation Unit has required skills to translate national water and sanitation policies into implementable actions?

Strongly Agree	Agree	Not sure	Disagree	Strongly Disagree
1	2	3	4	5

If no, what is/are the reasons………………………………………………….

32. Does the Water and Sanitation Unit conduct policy evaluations in order to contribute to future policy reviews?

Strongly Agree	Agree	Not sure	Disagree	Strongly Disagree
1	2	3	4	5

33. Does the National Department of Water and Sanitation request policy implementation feedback in order to understand implementation challenges and improve future policies?

Strongly Agree	Agree	Not sure	Disagree	Strongly Disagree
1	2	3	4	5

SECTION E:
These questions relate to your involvement and contribution to national water and sanitation policy development process. Please place an X in the correct column.

34. Do you think that the water and sanitation sector should design an explicit requirement of how Water Services Authority should submit policy evaluation feedback to the National Department of Water and Sanitation?

Strongly Agree	Agree	Not sure	Disagree	Strongly Disagree
1	2	3	4	5

35. Do you think that the National Department of Water and Sanitation uses evidence to support decisions already taken?

Strongly Agree	Agree	Not sure	Disagree	Strongly Disagree
1	2	3	4	5

36. The National Department of Water and Sanitation uses evidence to inform decisions to be made about policy interventions

Strongly Agree	Agree	Not sure	Disagree	Strongly Disagree
1	2	3	4	5

37. Do you think the current water and sanitation policies are effective?

Strongly Agree	Agree	Not sure	Disagree	Strongly Disagree
1	2	3	4	5

38. Should the National Department of Water and Sanitation change their policy development process in order to get Water Services Authorities more involved in the process?

Strongly Agree	Agree	Not sure	Disagree	Strongly Disagree
1	2	3	4	5

39. Do you think the current national water and sanitation policies hinders the way you perform your current duties?

Strongly Agree	Agree	Not sure	Disagree	Strongly Disagree
1	2	3	4	5

40. Do you think the current policy development process that the Department of Water and Sanitation use in developing water and sanitation policies requires improvements?

Strongly Agree	Agree	Not sure	Disagree	Strongly Disagree
1	2	3	4	5

41. Do you feel that you have ever contributed anything that assisted National Department of Water and Sanitation to make better policy decisions?

Strongly Agree	Agree	Not sure	Disagree	Strongly Disagree
1	2	3	4	5

42. Have you ever heard of Evidence based policy as an alternative to make better policy decisions?

Yes	1
Not sure	2
No	3
Maybe	4

43. Have you ever been invited to attend training on Evidence based policy?

Yes	1
No	2

44. If yes, did you attend?

Yes	1
No	2

45. Do you think Evidence based policy making will offer a viable policy making
alternative?

Strongly Agree	Agree	Not sure	Disagree	Strongly Disagree
1	2	3	4	5

APPENDIX F

Thesis 11 August
by Xaba Sibusiso

Thesis 11 August

ORIGINALITY REPORT

13%	12%	1%	2%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	www.dwaf.gov.za Internet Source	1%
2	onlinelibrary.wiley.com Internet Source	1%
3	dspace.nwu.ac.za Internet Source	1%
4	Submitted to Coventry University Student Paper	1%
5	ddp.org.za Internet Source	1%
6	researchspace.ukzn.ac.za Internet Source	1%
7	www.wrc.org.za Internet Source	<1%
8	www.gov.za Internet Source	<1%
9	www.sahrc.org.za Internet Source	<1%