CHAPTER ONE

INTRODUCTION: PROBLEM STATEMENT AND STUDY METHODOLOGY

1.0 INTRODUCTION

This chapter is an overview of the overall study, its objectives and how it was carried out. The chapter focuses on orientation and the problem statement, hypotheses, research questions, research objectives, research methods, and provides an outline of the chapters.

1.1 ORIENTATION AND PROBLEM STATEMENT

One of mankind's biggest global challenges is access to potable water supply; its availability, quality and governance. Currently some 1.5 billion people lack a safe water supply (COHRE, AAAS, SDC and UN-HABITAT, 2008: 8). This study looks at water sector reforms in Zimbabwe and South Africa with special focus on local potable water supply governance in the municipalities of Harare, Masvingo, Musina and Tshwane since the late 1990s.

Potable water supply governance is the range of political, organizational and administrative processes through which communities articulate their interests in the development and management of potable water resources and delivery of potable water services (United Nations Water Virtual Learning Centre-UNWVLC, 2008: 16). The way potable water supply governance is handled influences the level of development and progress of the particular community. According to the Global Water Partnership-GWP (2000: 44), poor water supply governance translates to underdevelopment. Conversely good water supply governance promotes development, progress and a healthy community.

According to the United Nations Educational, Scientific and Cultural Organization-UNESCO (2006: 6), a potable water governance process/system addresses among other things:

- the formulation and adoption of sustainable legislation, policies and institutions;

- enforcement and implementation of the adopted public policies and legislation and; and
- the clarification of the roles and responsibilities of all involved stakeholders regarding ownership, administration and management of water resources.

Thus potable water supply governance addresses both public policy and practice regarding potable water supply issues.

For Folifac (2007: 10), UNESCO (2006: 6), Mulder (2005: 1, 58), and Ashton *et al* (2001: xxvii) southern Africa (see Figure 1.1) faces severe and growing challenges in the governance of potable water supply. They indicate a range of factors responsible for this state of affairs, including population growth; the continuous depletion and pollution of water supplies; semi-arid conditions; anticipated trends of climate change in the face of global warming; successive droughts; lack of both administrative and political will; poverty and disparities in income; cultural and racial diversity; and the absence of scientific and technical knowledge, among others. In fact, the southern African region presents a complicated water resources governance scenario. The region has both natural and artificial challenges that intermingle to create an intricate and heterogeneous contextual framework. This framework demands knowledgeable and skilled water resources managers if there is to be long term sustainability of water resources in the region. Some of the technical and specialised issues that require expertise (both traditional/indigenous and contemporary) in handling them include:

- the impact of mining;
- agricultural activity;
- global warming;
- successive droughts;
- desertification;
- geological and hydrological issues;
- urbanisation and industrialisation;
- bulging population;
- diversity; and
- ever changing technology, ways of doing things and worldviews.

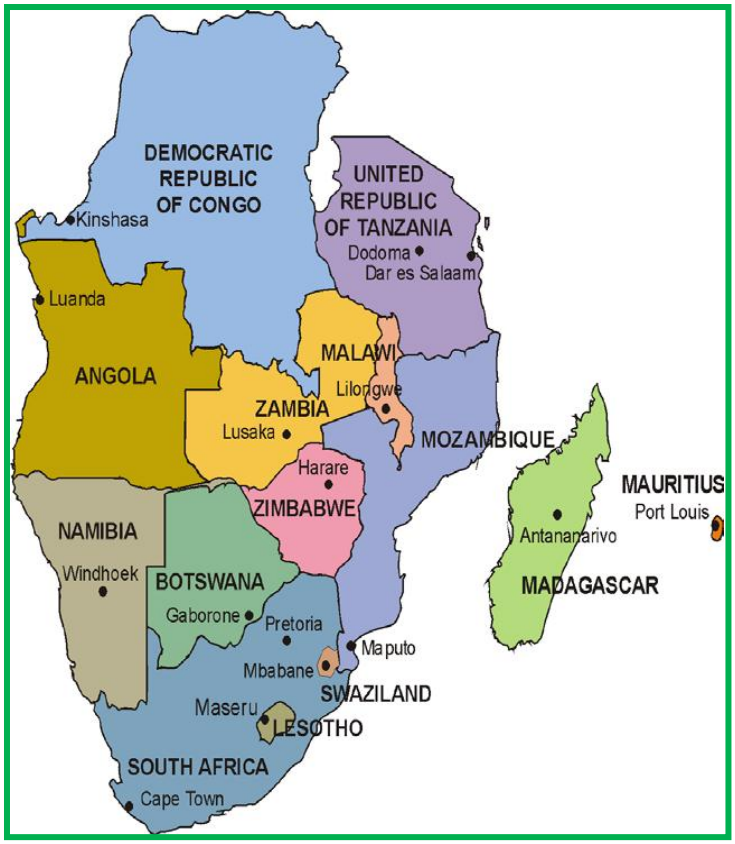

Figure 1.1: Map of southern Africa

(Source: Ramoeli, 2007: 2)

To deal with the issue of water management, both Zimbabwe and South Africa adopted the integrated water resources management (IWRM) paradigm in 1998 and formulated new legislation in line with the dictates of the new thinking (see the *National Water Act of South Africa*, 36 of 1998 and the *Water Act of Zimbabwe*, 31 of 1998). A unique feature of the new thinking and legislation that distinguishes it from previous legislation and policy frameworks in both countries is the participation of all stakeholders, especially users of water in the decision making process through consultative catchment management structures at various levels. The IWRM assumption is that by mobilising participation of stakeholders through recognised and legislated institutions the desired water management goals of achieving equitable access to water and sustainable, efficient and effective water use will be achieved.

For Chikwanha (2005: 19), treating southern Africa (see Figure 1.1) as a homogeneous bloc has been partly to blame for the failure to come up with relevant solutions for the apparent lack of

development and poor public governance in the region. She further argues that whilst southern African countries share relatively the same historical experiences and environmental and climatic conditions, their national socio-economic development and political sub-systems are different. The same applies to their geohydrology and availability of potable water resources. Zimbabwe, South Africa and Lesotho are already said to be water stressed (Redelinghuys, 2008: 15). Therefore the way these different regimes respond to global concepts like IWRM and public policy formulation and implementation is likely to be relatively different.

This study proposes to do away with the generic and homogeneous approach to southern Africa by focusing not only on two selected countries, Zimbabwe and South Africa. Their public management infrastructures, geological characteristics and geohydrological experiences can be both compared and contrasted; they have similar yet different characteristics. In each country two urban and two rural communities have been selected as case studies. This will ensure an in-depth comparative study of potable water governance in both the urban and rural settings allowing for both national and cross-national comparisons.

The main focus will be on the theoretical, legislative and policy formulation frameworks (planning); potable water supply governance infrastructure and institutional frameworks (organizing); potable water supply governance policy implementation (leading); and monitoring, evaluation and outcomes (controlling). Thus the classical management process will be used as one of the tools for phenomena analysis and comparison in this study (See Figure 1.2 below). It may be added that this is a continuous and integrated process and there is no clear demarcation between each of the successive phases of the process. Managers do not, for example, plan on Monday, organise on Tuesday, lead on Wednesday, control on Thursday, and take corrective action on Friday.

The model in Figure 1.2 below simplifies the complex management process. The division of chapters in this study shows that these functions may be carried out simultaneously, in a different order, with or without variations and depending on the situation at hand.

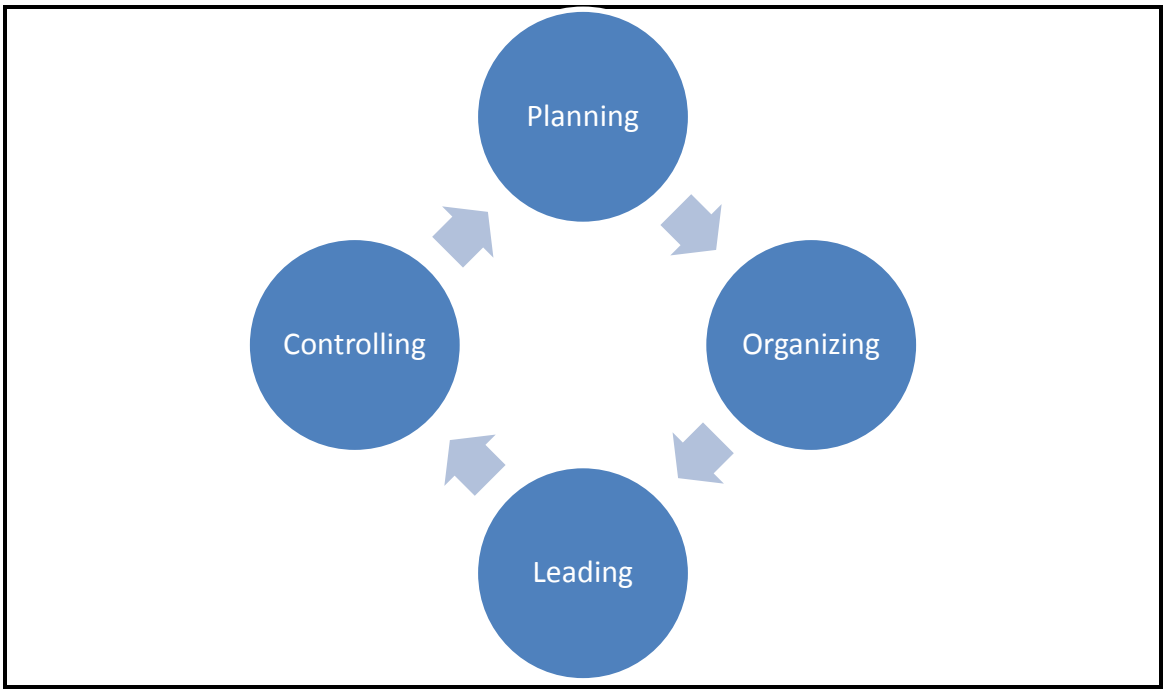

Figure 1.2: The classical management process
(Source: IPMZ, 1996: 1)

As put forward by Salminen and Viinamaki (2006: 3), the study of public management and governance requires comparison in order to discover cross-national generalizations, rules and other specific features. One goal of comparison is the systematic examination of the differences and similarities in the application of theories and models regarding potable water supply governance as determined by contextual settings. Comparison contributes to the development of governance theory and improves its applications, as well as the development of governance practices and social responsibility. Salminen and Viinamaki (2006: 3) further argue that studies employing the comparative method promote an understanding of pervasive global reforms and characteristics. The approach 'opens the door to a transition from traditional ethnocentric perspectives to a global scope that integrates knowledge from various places and cultures. Administrative knowledge, generated through the comparative method, serves practitioners and expands their horizons of choice and consideration for adoption' (Landman, 2005; as captured in Salminen and Viinamaki, 2006: 3). Hence the need for such studies in water supplies governance in southern African communities.

Comparative studies on public policy and governance that are currently circulating in the research community in southern Africa, focus on issues such as water governance and environmental services in colonial municipalities (Maki, 2008); hydro-political and potential cross-national conflict (Redelinghuys, 2008; Opoku-Ankomah, 2006); cross-national politics and services delivery (Chikwanha, 2005); comparisons between the viability of IWRM in poor economies and wealthy developed economies (Mulder, 2005; Wolf, 2007); the private sector role (Schilz, 2006); and general cross-national municipal comparisons (ECA/SRDC/SA/PUB/2001/03). None of these studies focus on current comparative trans-national potable water governance issues with special emphasis on the IWRM philosophy. This study seeks to fill this gap. It is imperative that communities, especially proximity communities with relatively comparable experiences, learn from one another in the search to find solutions to common problems (ECA/SRDC/SA/PUB/2001/03).

This study argues that there are serious gaps in southern African water use policies and implementation. While the availability of current acceptable and supportive public potable water supply policy and legislation in both Zimbabwe and South Africa indicates the beginning of a commendable process of water services delivery to all stakeholders, this alone is not sufficient unless supported by effective systems and processes for effective delivery (Folifac, 2007: 23). Formulation and adoption of a policy or piece of legislation does not automatically translate to its implementation and/or enforcement (Hall, 1992: 15). Most African countries have developed plans to reach the Millennium Development Goals (MDGs) on water supply and sanitation (WSS), but these often only exist as documents and are neither country-owned nor actively implemented (Kwabena, 2009: 2). For Shah (2007, 65):

> Making water laws is easy – enforcing them is not. Renaming regional water departments as basin organizations is easy – but managing water resources at basin level is not. Declaring water an economic good is simple – but using the price mechanism to direct water to high-value uses is proving complex.

Furthermore, the diversity of functions involved in the deteriorating physical environment has made the functions of effective water resource management a very complex quest to be handled and managed by usually unskilled municipal officials.

1.1.1 Study cases[1]

Harare in the Harare Metropolitan Province and Pretoria in the Tshwane Metropolitan Municipality are the capital cities of Zimbabwe and South Africa respectively. Masvingo and Vhembe are largely rural municipal entities in Zimbabwe and South Africa respectively. The selection was made in an effort to draw comparisons between metropolitan urban IWRM structures of IWRM and those in rural municipal entities, which may well have considerably different demands for effective water governance.

Zimbabwe. urban: The city of Harare in Zimbabwe has an estimated population of 3 500 000 (CHRA website, 2009). It is composed of Greater Harare, Chitungwiza, Ruwa and Epworth. The main focus was on Greater Harare with an estimated population of 2 175 000 (Demographia, 2010: 16) (see Figure 1.3).

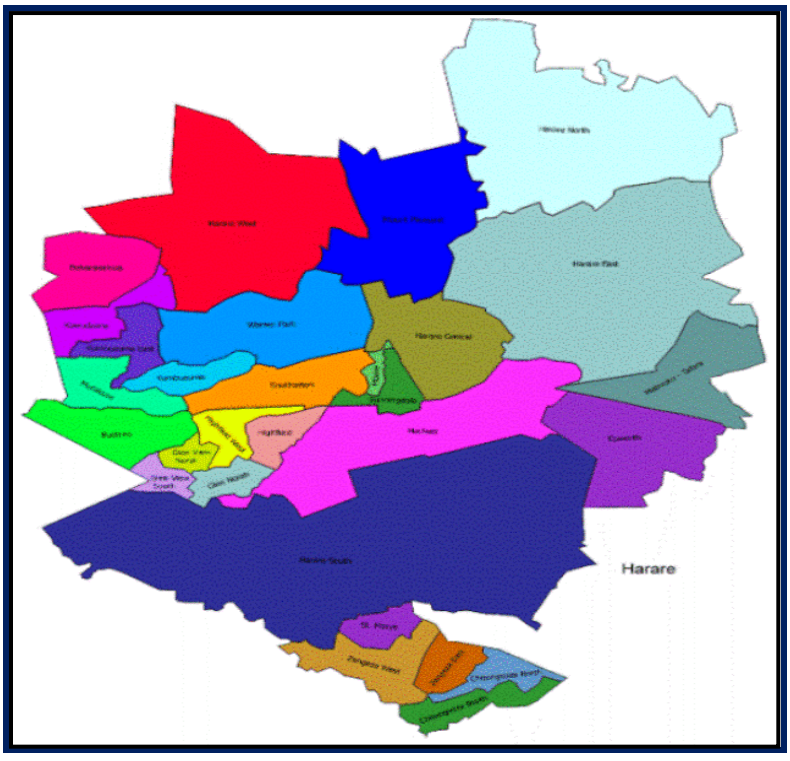

Figure 1.3: Greater Harare

(Source: CHRA Website [www.chra.co.zw], accessed 20 November 2009)

[1] For a detailed description of the case studies see chapter 5.

Since the establishment of Harare in 1890 the city's population, industrial and commercial activities have grown rapidly, but this remarkable growth has not been accompanied by corresponding water services infrastructure and professionalism, especially in the post-colonial period (Musemwa, 2008: 15). The Morton Jaffray Water Works built in 1953 to provide the city with clean water is yet to be upgraded. Harare's two main sources of water (Lake Chivero and Lake Manyame) are seriously polluted by sewage effluent and by industrial and agricultural waste.

Figure 1.4: Lake Chivero

(Source: CHRA Website [www.chra.co.zw], accessed 25 January 2010)

In May 2005, government decision to transfer the governance of water resources from the metropolitan municipalities to the Zimbabwe National Water Authority (ZINWA) exacerbated the situation (Musemwa, 2008: 15). Water borne diseases have been prone to break out regularly

in the city, culminating in the catastrophic cholera outbreaks of 2008-2009 (CHRA Website [www.chra.co.zw], 2009; Nyandoro, 2011: 154).

Figure 1.5: Women carrying containers of water during the 2008-2009 cholera outbreak in Harare

(Source: CHRA Website [www.chra.co.zw], accessed 25 January 2010)

Zimbabwe, rural: Masvingo is the central district of the seven districts in Masvingo Province, Zimbabwe (see Figure 1.4).

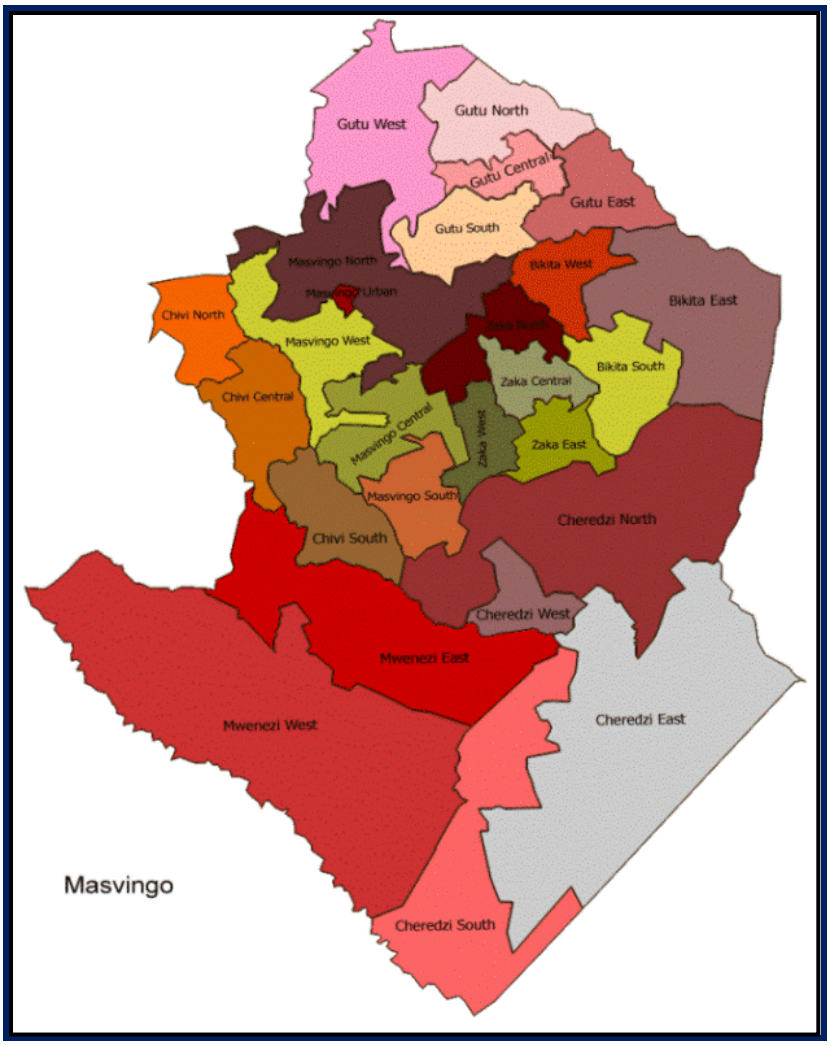

Figure 1.6: Masvingo Province

(Source: City of Masvingo archive files, accessed 29 February 2010)

Masvingo District comprises the city of Masvingo, Masvingo Rural, Mashava Mine and Renco Mine. The focus here is on Masvingo City and Masvingo Rural. The district has a population of 400 000 people. The city of Masvingo water works was last upgraded in 1982 (Dube, 2002: 2). The main source of raw water for Masvingo is Lake Mutirikwi, the biggest lake in the country (see Figure 1.7). This source is vulnerable to pollution from the surrounding mining and agricultural activities of nearby communities, especially after the sporadic land seizures in the early 2000s. The district is one of the dry areas of Zimbabwe (Dube, 2002: 1).

Figure 1.7: Lake Mutirikwi

(Source: City of Masvingo Information Office, accessed 25 January 2010)

South Africa, urban: The city of Tshwane in South Africa has an estimated population of 2 415 000 (Demographia, 2010: 15). It comprises Pretoria, Centurion, Laudium, Eersterust, Akasia, Atteridgeville, Soshanguve, Crocodile River, Ga-Rankuwa, Mabopane, Winterveld, Hammanskraal, Temba and Mamelodi (see Figure 1.5). The main focus was on Pretoria.

Tshwane is highly developed. Its municipal council can match that of any in the developed world (UN, 2001: 27). The city is a water service authority in its area of jurisdiction in terms of the Water Services Act of 1997 (Act 108 of 1997). It obtains the bulk of its potable water from the regional utility Rand Water, supplemented with boreholes and springs in dolomitic groundwater aquifers and surface water from Rietvlei Dam (see Figure 1.8) within the bulk distribution system (Mothopong Consulting, 2005: 1).

Figure 1.8: Rietvlei Dam

(Source: WRC Website [www.wrc.org.za], accessed 28 May, 2011)

The boreholes and springs are located in dolomite rock formations which are known for the tendency to form of cracks, ponors and sinkholes. They are at high risk of pollution, and a there is a high percentage of precipitation recharge to the groundwater of the underground water aquifers. According to Mothopong Consulting (2005: 1-10), because of these characteristics, the water sources could be polluted by cemeteries, sewage, industrial and commercial waste, agricultural manure, fertilizers and other chemicals. Thus, although the Tshwane is not in the city of Harare's desperate situation, there is indeed an urgent need for finding solutions to the threat of water pollution.

Figure 1.9: City of Tshwane

(Source: Tshwane Website [www.tshwane.gov.za], accessed 21 February, 2009)

South Africa, rural: Vhembe is one of six district municipalities in the Limpopo Province, situated in the northernmost part of South Africa (see Figure 1.6). It has an estimated population of 1 249 000 (Vhembe Website [www.vhembe.co.za], 2009). Like Masvingo, Vhembe is largely rural, composed of the local municipal authorities of Musina, Makhado, Mutale and Thulamela.

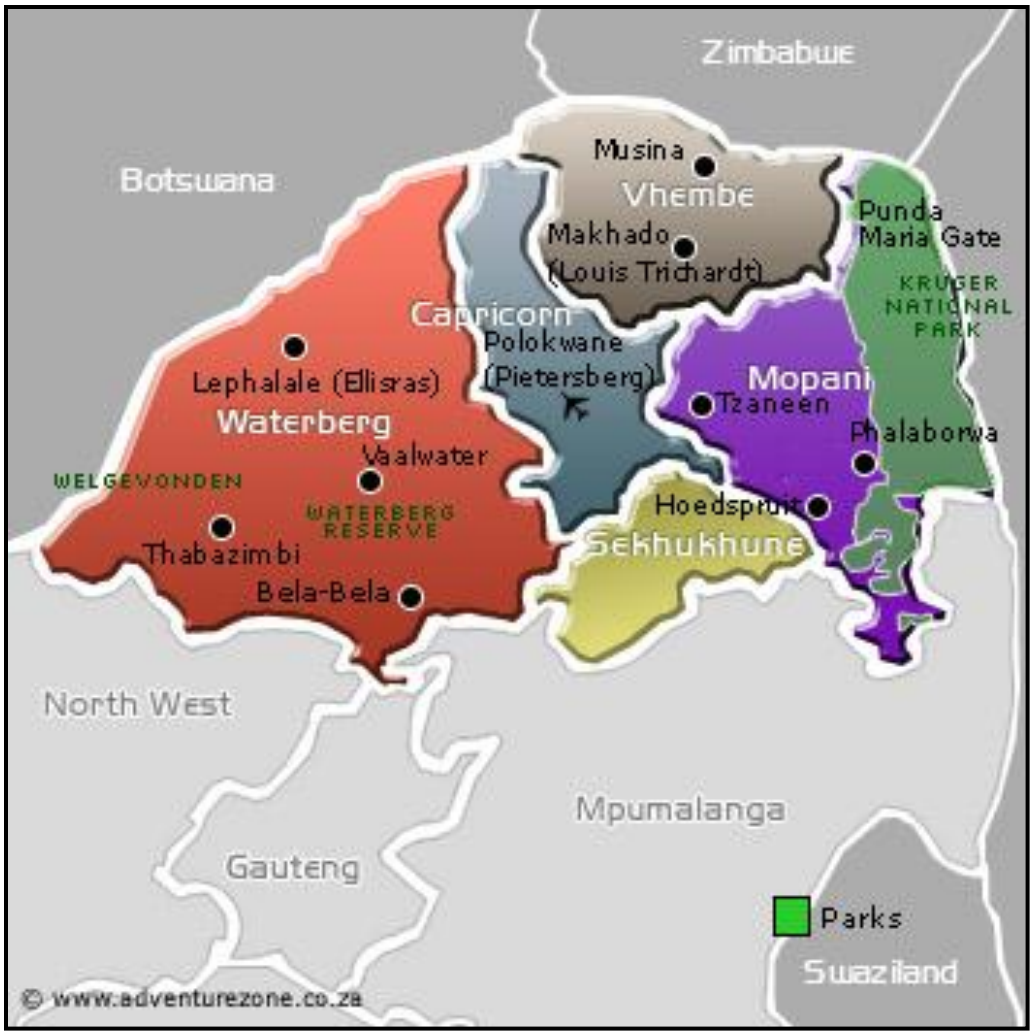

Figure 1.10: Limpopo Province

(Source: Google Maps, accessed 21 February, 2009)

The main focus here was on Musina. The district has a new surface water dam, Nandoni (see Figure 1.11) which is intended to supply the whole region with sufficient water, but water sources in the area are still vulnerable to contamination from the mining and agricultural activity in the catchment area.

Figure 1.11: Nandoni Dam

(Source: DWA Website [www.dwa.org.za], accessed 15 October, 2011)

1.1.2 Statement of the problem

The main problem in all four study areas is limited and undeveloped potable water sources, and the presumed poor potable water supply governance due to ill maintained potable water development, transport, storage, purification, costing and reticulation infrastructure. Together with lack of relevant professional skills, this situation makes it difficult for the authorities concerned to implement the IWRM paradigm as adopted in the two countries' legislative and policy frameworks of the late 1990s. Potable water governance systems determine who gets what water, when and how. This study thus provides comparative answers to the 'what, when and how' of the relationship between public policy formulation and implementation in the development and governance of potable water supply in the selected cases.

The question addressed in this study is whether the theory of water governance, as outlined in the adopted policies and legislation, has been applied in the development and governance of potable water supply in the selected municipalities. How have Zimbabwe and South Africa (as represented by the selected cases) fared in the implementation of the IWRM governance paradigm? What are the reasons for the current state of affairs?

The focus of this study is thus a comparative analysis of the development of public policies and services relating to potable water supply and their implementation in the selected cases. Questions are raised on the diverse patterns of municipal governance, access to potable water, different intervention mechanisms made by the local authorities (and the consequences of these interventions) since the late 1990s when the two countries adopted the IWRM paradigm in their water resources governance structures. What exactly can be learnt from the experiences and ideas of each of the selected cases? The study assumes that the key reform elements largely valid for both Zimbabwe and South Africa include:

- improving water utilities performance;
- developing pro-poor and sustainable tariffs;
- managing assets;
- good governance (see unit 3); and
- introducing effective regulation.

The running theme of this study is:

IWRM in local authorities: Water to the people, for the people and by the people

1.2 RESEARCH AIMS, QUESTIONS, OBJECTIVES AND CONTRIBUTION

The overall aim of this study is to contribute a theoretical framework that will help towards the improvement of the management and governance of potable water supply services by providing

useful information for public decision making and encouraging sharing of experiences in southern Africa. The study aims at enlarging considerably the knowledge base and understanding of water sector reforms in Zimbabwe and South Africa.

1.2.1 Research questions

The following research questions helped in determining the relationship between public policy and/or legislation formulation and adoption on the one hand, and implementation and enforcement of the adopted policies and legislation on the other:

- To what extent are the grassroots and other stakeholders involved in the formulation and adoption of legislation and policies that govern their access to potable water supply services in Zimbabwe and South Africa?
- What has been the comparative state of potable water supply sources, policies, infrastructure and practice in urban and rural environments in Zimbabwe and South Africa since 1998?
- What are the common and differing perspectives of stakeholders regarding IWRM and its implementation in the governance of potable water supply in the four locations of research?
- What are the challenges faced by each of the four cases in the implementation of IWRM and the governance of potable water supply?
- What lessons can be learnt from the experiences of the four study locations in their attempts to implement the IWRM paradigm?

1.2.2 Research objectives

The following are the corresponding specific objectives of the study:

- to explore the extent to which the grassroots and other stakeholders are involved in the formulation and adoption of legislation and policies that govern their access to potable water supply services in Zimbabwe and South Africa;
- to draw a comparison between urban and rural IWRM policies, strategies and practices in

Zimbabwe and South Africa;

- to identify and explain the common and differing perspectives of stakeholders (water users, government, civic organizations, etc) regarding the IWRM paradigm and its implementation in the governance of potable water supply in the four selected locations;
- to give a clear outline of the challenges faced by each of the four cases in the implementation of the IWRM paradigm and the governance of potable water supply since 1998; and
- to draw lessons from the experiences of the four locations in their attempts to implement the IWRM framework.

1.2.3 Contribution of this study to the public management body of knowledge

The anticipated major outcome and contribution of this study to the public management body of knowledge is a multidimensional-stakeholders systems theory (see the theoretical framework of the study below). This study will contribute insight into both the debate and practice of public governance in general and potable water governance in particular. It will contribute to the understanding of governance regimes that underlie the provision of potable water to residents of the selected cases in light of the IWRM paradigm. Its central theme is comparison and evaluation of the nature of potable water services in the selected cases in the thirteen-year period after the two countries adopted the IWRM paradigm. It argues that there are gaps between public policy formulation and implementation regarding water supply in the selected cases. An analysis of the two loci (formulation and adoption versus implementation and enforcement) will determine the gap/gaps between them and thus help in the generation of interdisciplinary literature that will be of use in the body of knowledge on the public management and decision making processes involved in potable water supply governance. Findings of the study will also be used as training material and a basis for further studies and dialogues among communities in the region.

In fact, through better understanding of the complexity and dynamics of water sector reforms in both Zimbabwe and South Africa, the study will provide lessons learnt on potentially the most critical issues as a basis for future reforms and practices in the governance of water resources.

1.3 HYPOTHESES

In line with the above research questions and objectives the following hypotheses were formulated as intelligent guesses and guidelines around which this study involves:

- Although the principles and practices of water management are largely dependent on local conditions and geohydrological complexities (rainfall and drainage patterns, geology and soil formations), the water sector reforms and services in Zimbabwe and South Africa have more commonalities than divergent features;
- The adoption of the IWRM policy framework in Harare, Masvingo, Tshwane and Vhembe was not followed by comparable implementation of the policy framework.
- Lack of ownership, lack of political and public administrative will, and low prioritisation of potable water supply have translated into a lack of policy implementation and enforcement, and inadequate institutional facilities for dealing with potable water issues.
- The level of economic development and the status of technological/scientific knowledge within a community determine the adoption of the IWRM paradigm, its implementation, effectiveness and the efficiency of the existing water frameworks and institutions.

1.4 RESEARCH METHODS

This study is based on the comparative, systems, classical management and interdisciplinary approaches. To meet the demands of this multidimensional framework a variety of research methods and data sources were used to ensure a balanced analysis and evaluation of the problem. The research undertaken included an extensive review of theoretical literature as well as the use of empirical methodology. In fact, the ideal situation for this grassroots type of study would be the use of a full scale participatory approach, but because of financial and language constraints, a combination of some elements of participatory research and full-scale descriptive survey research were used for the study (see chapter 5).

1.4.1 Review of sources

In addition to geographical and geo-hydrological maps, aerial photos, geographical information systems and other documents available on managing water resources in general and in the study locations specifically, the following sources were consulted to ensure a broad, multidimensional, interdisciplinary and balanced review of both primary and secondary sources of relevance. These included government legislation, municipal bylaws, municipal policy documents, workshop reports and minutes, as well as published academic works, academic journals, doctoral theses, Internet sights, magazines and newspapers.

1.4.2 Empirical study

The scope of the empirical investigation was limited to the Harare, Masvingo, Tshwane and Vhembe municipalities with a combined population of about 6.3 million people.

1.4.3 Research design

The study was hybrid; it was based on case studies, comparative, qualitative, historical and exploratory approaches. This hybrid design was selected because it was both flexible and adaptable to suit the demands of the situation. It gave the researcher room for both exploration and analysis of data using historical, multidimensional, interdisciplinary, qualitative and quantitative evidence within the multi-stakeholder systems philosophy and public management theoretical framework.

1.4.4 Data collection procedures

Data was collected through the use of documented, interview, questionnaire and observation data collection techniques. Using an introductory letter from Professor Tempelhoff of the NWU School of Basic Sciences VTC, permission was granted by the management of Harare, Masvingo, Musina and Tshwane municipalities to conduct the necessary research among their respective employees and residents in their areas of jurisdiction.

The empirical studies were conducted as per the following time schedule:

- Masvingo (urban and rural): August to December, 2010;
- Harare: November, 2010 to July, 2011;
- Musina (urban and rural): January to June, 2011; and
- Tshwane: January to June, 2011.

The first phase of the studies focused on potable water governance investigation of available sources in the municipal, national, international, NGO, and professional institutes' archives and libraries, as well as websites dealing with the areas selected for study. This preliminary study helped in shaping the structured and informal interviews, questionnaires and informal discussions that followed.

Both the formal structured interviews and informal unstructured interviews on IWRM policies and their implementation in the selected cases were conducted with 25 respondents/interviewees. The 24 interviewees included:

- Masvingo Urban's acting town clerk (1);
- Masvingo Rural's district council chief executive (1);
- Masvingo Urban's housing officer, who doubled as research assistant (1);
- Masvingo Rural's finance director who doubled as research assistant (1);
- heads of water services management/civil engineers responsible for water resources from the municipalities of Masvingo Urban , Masvingo Rural, Harare and Tshwane (4);
- front-office water services officers (1x5);
- Harare's accounting assistant who doubled as research assistant (1);
- DWA executive (1);
- 6 research assistants (not municipal employees), (at least one assistant from each of the study locations); and
- 3 assistants who translated the questionnaire from English into Tshivenda, Isizulu and Setswana).

This made a total of 24 interviewees.

In the formal structured interviews, a set of questions was prepared to serve as a guide to stimulate discussion in the structured interviews (see Appendix 2). Interviewees were given an option to either participate or decline participation. None of them declined to do so, although interest and commitment was not pitched at the same level. For example South African front office staff seemed reluctant to participate (possibly for security reasons), let alone give the researcher and his assistants access to their superiors. In addition, time constraints also played a role in the case of senior executives, notably in Tshwane and Harare, who had very busy schedules (see chapter 5). Nonetheless, exercising great patience and diplomacy and with the unwavering support of his research assistants, the researcher managed to forge a significant degree of cooperation.

Two questionnaires (one for municipal and rural district council workers; and the other for residents) to investigate the level of understanding and perception of consumers on water services and the IWRM philosophy were also distributed to:

- 100 individuals from households in Greater Harare;
- 20 municipal workers in Greater Harare;
- 100 individuals from households in Masvingo (50 in Masvingo Urban and 50 in Masvingo Rural);
- 20 municipal workers in Masvingo Urban and 20 Masvingo Rural district workers;
- 120 individuals from households in Pretoria who were handed questionnaires while frequenting the Church Square open space and banking halls in the city centre;
- 100 individuals from households in Vhembe (50 in Musina Urban and 50 in Musina Rural); and
- 20 municipal workers in Musina.

This made a total of 500 sampled questionnaire respondents

The residents' questionnaire was translated into local languages to ensure effective communication, because some of them could not communicate effectively in English.

Interestingly very few respondents opted for the local language questionnaire. Although this might have affected the quality of their responses it was a blessing in disguise for the researcher who otherwise would have had to rely largely on translators in order to analyse the responses. Translators were used for the South African local languages. The English and Shona versions were compiled by the researcher himself.

In the empirical study, the researcher did not sample any formal organisation outside water authorities. However, these were informally catered for in residents samples eg interviewees in Harare included social workers and NGO workers (see appendix A). The central issue is stakeholder participation and thus most of the findings and conclusions in chapter 6 and chapter 7 centre on the extent to which stakeholders are involved in potable water governance

Comprehensive field notes were documented throughout the visiting and discussion periods. The researcher moved from case to case for the entire empirical and field study period. It is however important to note that the distribution and collection of questionnaires in Musina and Tshwane was done solely by the designated research assistants who were also responsible for identifying the translators of the questionnaires into local languages (see chapter 5).

1.4.5 Data presentation and analysis procedures

The researcher quantified data and grouped them accordingly. To make the information more meaningful to the reader, data was reduced to narrative descriptions, tables, bar graphs, pie charts, hydrological maps and pictures. Narrative descriptions were used to explain given scenarios and relationships. Tables condense numerical data and thus make it easier to understand. In addition to condensing data, graphs, charts, maps and pictures give data a pictorial appeal and make it easier to compare.

1.5 ETHICAL CONSIDERATIONS

In accordance with accepted university higher degrees guidelines, the study made use of an introductory letter from the NWU School of Basic Sciences VTC and an introductory and

consent letter from the researcher. This ensured that the participants understood the objectives of the study, while assuring the respondent that the researcher treated the responses provided as strictly confidential. Also, in light of the fact that water management facilities are, as a rule, national key point localities, the researcher gave the assurance that a concerted effort would be made not to disclose any information of a sensitive nature. Where interviewees indicated that a specific comment should not be used in the study, the researcher respected the request of the informant.

The researcher also indicated that once the study was completed, a report of the findings would be provided to each municipality that contributed to the project. In addition, a feedback symposium involving academics, municipal authorities, government policy makers and other stakeholders would be held in Masvingo, Zimbabwe, jointly hosted by the city of Masvingo and the Zimbabwe Open University. Although the first session of the symposium would centre on findings from this study, other presenters and researchers would give their input on the theme:

Local authorities: Water to the people, for the people, and by the people.

Special invitations would be sent to participating municipalities and an appeal would be made to other local authorities and stakeholders in the region and beyond to participate in the symposium. In addition to the thesis feedback report, the idea is to come up with a collection on fresh water supply governance in local authorities that would serve as a point of reference in the governance of potable water supply in municipal and local authorities not only in Zimbabwe and South Africa, but southern Africa as a whole.

1.6 THEORETICAL FRAMEWORK

The study was based on what the researcher calls a ‘multidimensional-stakeholder systems theory’ derived from the IWRM paradigm and the systems theory. The classical management framework of planning, organising, leading and controlling (POLC) was also invoked to analyse the cyclical management process. Inputs, processes and their resultant outputs were observed, analysed and compared across the spectrum of four selected case studies. Figure 1.12 summarises the theoretical framework for this comparative study.

The argument in this thesis is that the world is a system with layers of subsystems. Whatever happens in any of the subsystems affects the others. However, the impact of such incidents depends on local systems preparedness and settings within the broader world system. The internal (country) and external (regional, continental and international) subsystems have to be manipulated and well aligned to absorb any shocks that might arise in communities' survival strategies in the global village.

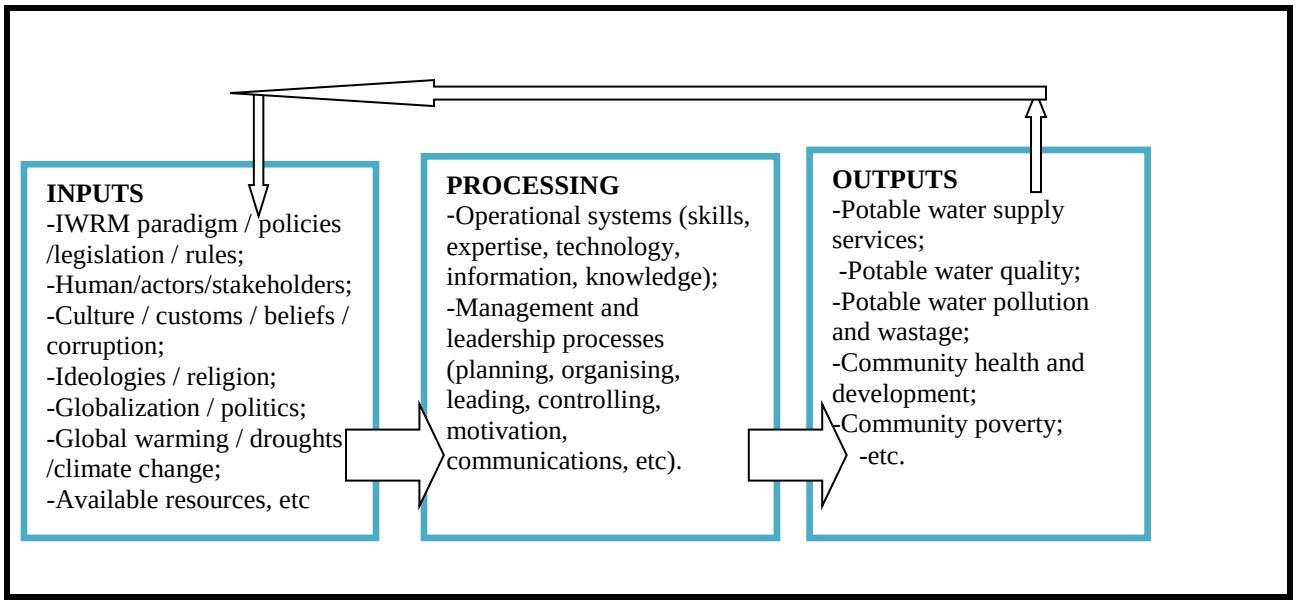

Figure 1.12: A multidimensional systems theory.

1.7 OUTLINE OF CHAPTERS

Chapter 1: Introduction: Problem statement and study methodology.

Chapter 2: Conceptual frameworks of comparative studies, systems theory, common pool resources and governance.

Chapter 3: A global overview of potable water resources, their availability and accessibility in southern Africa.

Chapter 4: Legal frameworks in the governance of potable water supply in Zimbabwe and South Africa: A global, regional and national overview of the integrated water resources management (IWRM) paradigm.

Chapter 5: Empirical case studies on the governance of potable water supply in Harare,

Masvingo, Musina and Tshwane.

Chapter 6: Presentation and discussion of empirical findings.

Chapter 7: Summary, conclusions and recommendations.

1.8 SUMMARY

Southern Africa faces increasingly severe challenges in the governance of potable water supply due to population growth; the continuous depletion and pollution of water supplies; semi-arid conditions; anticipated trends of climate change in the face of global warming; successive droughts; lack of both administrative and political will; poverty and disparities in income; cultural and racial diversity; and the absence of scientific and technical knowledge, among others. To deal with these problems both Zimbabwe and South Africa have adopted the IWRM paradigm and formulated new legislation in line with the dictates of the new thinking.

The adoption of IWRM in the study cases was not followed by comparable implementation of the policy framework. Lack of ownership, lack of political/public administrative will, and low prioritisation of potable water supply, translated to lack of policy implementation and enforcement and inadequate institutional facilities for dealing with potable water issues. It is also argued that the level of economic development and the status of technological or scientific knowledge within a community determine the adoption of the IWRM paradigm, its implementation, effectiveness and efficiency of the existing water frameworks and institutions.

This study sought to compare and contrast urban and rural IWRM policies, strategies and practices in Zimbabwe and South Africa. It investigates the extent to which the policy's institutional, legislative and legal frameworks help in the implementation of IWRM in each of the case studies. It also sought to identify and explain the similar and differing perspectives of stakeholders regarding IWRM and its implementation in the governance of potable water supply in the study locations; to give a clear outline of the challenges faced by each of the case studies in the implementation of IWRM and the governance of potable water supply; and to draw lessons from the experiences of the four cases in their attempts to implement the IWRM framework.

Research methods involved both theoretical review and an empirical study based on case studies, comparative, qualitative, historical and exploratory approaches.

The next chapter looks at the conceptual frameworks of comparative studies, systems theory, common pool resources and governance.