

CHAPTER SEVEN

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

7.0 INTRODUCTION

This chapter synthesizes the discussions in this thesis. The chapter draws conclusions from discussions in the previous chapters and then uses them to explain and answer the research problems, questions and hypotheses as outlined in chapter 1. It then goes on to make recommendations as determined by the conclusions. For recap purposes the chapter starts by summarising the discussions in the previous chapters before it goes on to conclusions derived from each of the chapters linking these conclusions to the problem statement, research questions or hypotheses. Thus this chapter is divided into the following major sections:

- Summary;
- Conclusions; and
- Recommendations.

7.1 SUMMARY

This study is a comparative analysis of the development of public policies and services relating to potable water supply and their implementation in the selected cases in Zimbabwe and South Africa. It looks at the diverse patterns of municipal governance, access to potable water, different intervention mechanisms made by the local authorities, and the consequences of these interventions. The study hypothesised that although the principles and practices of water management are largely dependent on local conditions and geohydrological complexities, the water sector reforms and services in Zimbabwe and South Africa have more commonalities than different features. It further hypothesised that the adoption of the IWRM policy framework in Harare, Masvingo, Tshwane and Vhembe was not followed by the proscribed implementation of

the policy framework. It also hypothesised that lack of ownership, lack of political and public administrative will, and low prioritisation of potable water supply, translated to lack of policy implementation and enforcement, and lack of proper institutional facilities for dealing with potable water issues. The study further hypothesised that the level of economic development and the status of technological/scientific knowledge in a community determine the adoption of the IWRM paradigm, its implementation, effectiveness and the efficiency of the existing water frameworks and institutions.

The study proposes what the researcher calls ‘a multidimensional-stakeholder-systems theory’ derived from the IWRM paradigm and the systems theory for effective governance of potable water supply. The classical management framework of planning, organising, leading and controlling (POLC) is invoked to analyse the cyclical management process. Inputs, processes and their resultant outputs are observed, analysed and compared across the spectrum of four selected case studies. The argument in this thesis is that the world is a system with layers of subsystems. Whatever happens in any of the subsystems affects other subsystems. However, the impact of such incidents depends on local systems preparedness and settings within the broader world system. The internal (inside the 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.

Chapter 1 is an overview of the study as a whole, its objectives and how it was carried out. The chapter focuses on orientation and problem statement, hypotheses, research questions, research objectives, research methods, and provides an outline of the chapters. In chapter 1 it is argued that southern Africa faces severe and growing 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 other issues. To deal with these daunting 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 objectives of the study are identified and outlined. They are to investigate the extent to

which the institutional, legislative and legal frameworks helped in the implementation of the IWRM paradigm in each of the four case studies; to identify and explain the common and differing perspectives of stakeholders on the IWRM paradigm and its implementation in the governance of potable water supply in the four selected locations; to give a clear exposition of the challenges faced by each of the four cases in the implementation of the IWRM paradigm and the governance of potable water supply; and to draw comparative lessons from the experiences of the four cases in their attempts to implement the IWRM framework. Research methods are also explained. They involve both theoretical review and an empirical study based on case studies, as well as comparative, qualitative, historical and exploratory approaches.

Chapter 2 provides a theoretical, conceptual and evolutionary review of comparative studies; systems theory; common pool resources; and governance as presented by various researchers and academics. It argues that the study of public management requires comparison in order to discover cross-national generalizations, rules and other specific features. Comparative methods contribute to the development of administrative theory and improve its applications, as well as the development of administrative practices such as good governance and corporate social responsibility. Studies employing the comparative perspective promote an understanding of pervasive global reforms and characteristics. The chapter further looks at the systems theory, a perspective based on the assumption that the whole is more than a mere summation of its constituent parts. Anything that affects one part of the system also interacts with other parts of the system. Thus, issues must not be considered in isolation, but in their total context. The chapter sees governance as processes and systems by which an organization or society operates. Governance helps define who should have power and why, who should have voice in decision-making, and how account should be rendered. At the heart of contemporary practices and discussions of governance are its sub-concepts of public policy, decentralization, public participation, empowerment and gender mainstreaming. It is argued that the most trusted route to development as well as both community and individual well being, is through an all-encompassing governance system, especially with regard to common pool resources like potable water resources.

Chapter 3 argues that there is sufficient fresh water in the world for everyone's essential personal and domestic needs. However, lack of distribution networks and working systems to extract groundwater or harvest rainwater; exclusion from these services or facilities; inequitable allocation of water resources; and pollution, have a negative effect on the availability of sufficient clean water. In some cases excessive extraction and contamination of groundwater also and threaten long-term use. In rural areas many people collect water of dubious quality from unprotected wells, often at a great distance from their homes, impossible for them to collect sufficient water for their needs. Toilets are often seen as unnecessary or unaffordable. In urban areas low-income groups in informal settlements often lack access to adequate water supply and sanitation. Piped water supplies and sewers seldom cover informal areas and people living there access water from a variety of generally inadequate water supply options, such as wells built close to latrines, or purchasing water from small-scale providers, such as door-to-door water vendors, whose supplies may not be of good quality. Therefore the main challenge is neither water stress nor scarcity; instead it is poor governance and the wrong attitude! This challenge calls for management strategies that address the mindset and issues of capacity building so that responsible authorities are well equipped to launch the change process. Water stress and scarcity are symptoms of poor governance of public and natural resources. Lack of basic services is due to mismanagement, corruption, lack of appropriate institutions, bureaucratic inertia and a shortage of new investments in building human capacity and physical infrastructure. Water shortages and increasing pollution are to a large extent socially and politically induced challenges. These are issues that can be addressed by changes in water demand and use and through increased awareness, education and water policy reforms. The water crisis is thus increasingly about how we, as individuals, and as part of a collective society, govern the access to and control over water resources and their benefits.

Chapter 4 is an overview of the legal framework that puts boundaries on the human right to water. Water rights can be broadly classified as public, common or private property. Public water rights are held by the state and it is the government that allocates rights to users. Common water rights refer to communal water rights where water can be used by people in ways that are specified by some community. In most African customary water laws, water from natural resources is considered community property and private ownership of such water is not

recognized. Private water rights are rights held by an individual or a private company. The 1970s saw the first UN conference dedicated to water. This conference defined water as a common good and declared the right of access to basic drinking water for all people. In 1992 the Dublin meeting placed water on the global development agenda. The Dublin Conference dealt with a number of issues, some of which are the economic value of water; women and water rights; the problem of poverty and how it impacts on access to water; conflict resolution and natural disaster awareness. The conference came up with the integrated water resources management paradigm (IWRM), characterised by the integration of society and natural resources. All countries in the SADC region are in the process of reforming their water legislation and their water related policies in line with IWRM.

Chapter 5 looks at the case studies, research design, subjects, sampling procedures, research instruments, data collection procedures, ethical considerations, and data presentation and analysis procedures. The research design is hybrid, although dominated by the descriptive survey approach. The design matched well with the target population and sample subjects that were scattered throughout all four study case areas. Questionnaires, interviews, documentary evidence and participant observation were used in the collection of data for this study. The empirical study was done in three stages, first a preliminary study of the study cases and their water sources, then a pilot study with ten members from the City of Masvingo, and finally full scale study in all the four study cases. Five hundred and twenty four (524) people were sampled for the study. Questionnaires were distributed via municipal offices; the Zimbabwe Open University offices; and local schools. Interviews were conducted with the municipal and council executives, water directors and their assistants. In addition, informal discussions were held with all direct research assistants. Data were then collated and analysed for presentation in narrative descriptions, tables, graphs, and actual frequencies and percentage responses.

Chapter 6 provided an analysis of the collected empirical data. While the framework for a perfect water management system exists in Zimbabwe and South Africa, the situation on the ground does not reflect this. The reform process has not taken off as expected owing to a combination of factors ranging from conflicting policies and weak institutional linkages, to insufficient funding. Thus the effectiveness of the new system has been found wanting in as far as implementation is

concerned. It has been established that IWRM in southern Africa has a very strong base in form of internal push factors and international pull factors, but also faces an uphill task in terms of aligning local and international forces, thereby coopting the much needed grassroots participation for human capacitation and socio-economic development as guided by the IWRM framework. All the studied municipalities fell short in terms of advocacy and enlightening residents and other stakeholders about the new IWRM framework adopted by the municipalities. Despite considerable infrastructural and technological, this study established that people are still virtually unaware of the new developments. Stakeholders, especially the grassroots level have been largely sidelined in the formulation and adoption of potable water supply policies in both Zimbabwe and South Africa.

Due to pipe bursts and water interruptions, access to tap water was by no means always assured. During water cuts, residents depended on risky and potentially polluted sources of water even in urban centres. Due to agricultural and mining activity, cemeteries, poor sanitation and non-existent toilet facilities in the peri-urban areas and nearby shanty communities, pollution is a very real danger. Added to this, the dolomitic character provides another source of pollution.

7.2 CONCLUSIONS

The findings of the study as discussed in the previous chapters will now be used to answer the research questions set out in chapter 1. The conclusions are categorised into foundational, thematic, and central argument conclusions.

7.2.1 Foundational conclusions

Before directing the focus on potable water supply governance; policy formulation and implementation in the selected cases, the first point of call is public management and its components as discussed in chapter 2. In this study, these are referred to as background or foundational issues because they lay the foundation for the research problem and central argument. Here are the foundational conclusions as derived from chapter 2:

The study of public management requires comparison.

In chapter 2 it was established that the study of public management requires comparison in order to discover cross-national generalisations, rules and other specific features. The main purpose of comparison is the systematic examination of the differences and similarities of theories, models, and phenomena so as to come up with the best fit. Comparative analysis increases the visibility of one structure by contrasting it with another. It is widely believed that the comparative method contributes to the development of administrative theory and improves its applications, as well as the development of administrative practices, such as good governance and corporate social responsibility. Studies employing the comparative perspective promote an understanding of pervasive global reforms and characteristics; they open 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.

Public management issues must not be considered in isolation, but in their total context

In chapter 2 it was also argued that public management processes are living systems composed of the external interface and internal subsystems. Anything that affects one part of the system also interacts with the other parts of that system. Thus, issues must not be considered in isolation, but in their total context. The implication is that in the modern world where emphasis is on globalisation practitioners, policy makers and academics have to be careful that they do not get carried away by the globalization noise and forget other subsystems that comprise the whole, because the whole is greater than the sum of its components.

Potable water is a public and common pool resource

In chapter 2 and chapter 4 it was established that potable water is a common pool and public resource; it is thus difficult to exclude members of a given community from having access to water. In most African customary water laws, water from natural resources is communal property and private ownership of such water is not recognised. Because they are vulnerable, common pool resources are subject to problems of congestion, overuse, pollution and potential destruction unless harvesting or use limits are devised and enforced (Ostrom, 1999: 2). In the

modern world common pool resources may be owned by national governments, local governments, municipalities or district councils as public goods; by communal groups as common property resources; or by private companies as private goods. When owned by no one common pool resources are used as open access resources. Most common pool resources are governed by common property regimes which are arrangements different from either private or state administration. They are based on self-management by a local community. This self-management approach to the governance of common pool resources is comparable to the IWRM philosophy as discussed in chapter 4.

Governance can be either good or bad

Chapter 2 has established that governance, whether good or bad, focuses on how decisions important to a society or an organisation are taken. It helps define who should have power and why; who should have a voice in decision-making; and who should be accountable for the success or failure of such decisions. This definition covers both the two main schools of thought on governance, namely the traditional and the contemporary views. It is both a journey and a destination, namely a process that leads to outcomes in the form of either development or underdevelopment.

The way potable water supply governance is handled influences the level of development

It was also established in chapter 2 that poor water supply governance translates to underdevelopment, and conversely, good water supply governance leads to development, progress and a healthy community. The primary reason for the wealth and poverty of a nation is thus its governance and not its natural resources. A country may have a plethora of natural and common pool resources. Yet, its people may still live in extreme poverty, as in most African countries. It is, however, also important to note that poverty/underdevelopment leads to poor potable water supply governance as demonstrated in the case of southern Africa in chapter 3.

7.2.2 Thematic conclusions

The study explored 5 major research questions which focused on:

- potable water sources, their availability and accessibility, and policies governing them;
- perspectives and impressions of stakeholders;
- the gap between policies and practice;
- challenges in bridging the gap; and
- lessons learnt from the cases experiences.

These research thematic areas are now used to draw thematic conclusions of the study.

Potable water not readily available and therefore not accessible

Potable water resources are believed to be scarce and not evenly distributed in the global village. Zimbabwe and South Africa are categorised as scarce and stress cases respectively. The implication is that currently there is limited accessibility to potable water supply in both countries. Whereas the scarce situation of Zimbabwe implies that potable water sources are available but not developed to meet human consumption needs, the South African stress situation implies that potable water sources are insufficient to meet the country's requirements even if fully developed. Following this line of argument, it is thus established that in Zimbabwe potable water sources are available but not accessible; and in South Africa the sources are not even readily available. The final conclusion on this line of thought, as discussed in chapter 3, is that potable water accessibility is limited in both countries.

In chapter 6 it was established that potable water accessibility was not evenly distributed across rural and urban centres in both countries. There were also frequent pipe bursts, especially in the Zimbabwean test cases, where the infrastructure is obsolete and overloaded. Furthermore, piped water is not available in Zimbabwean rural communities. In South Africa piped water is available but largely inaccessible because the systems were frequently dry due to water cuts and interruptions of water supplies.

The final conclusion made in chapter 3 is that there is sufficient fresh water in the world for everyone's essential personal and domestic needs. However, lack of distribution networks, maintenance and upgrade of infrastructure, and working systems to extract groundwater or harvest rainwater are just some of the reasons why so many people are excluded from this

service. Inequitable allocation of water resources and pollution limit people's access to sufficient clean water.

The foregoing shows that the main challenge is neither water stress nor scarcity. The major problem is centred on the governance of potable water supply and the attitude of the authorities! Water stress and scarcity are symptoms of poor governance of public and natural resources. The running theme in this study is that lack of basic services is due to mismanagement by those in authority; corruption by those in authority; lack of appropriate institutions; bureaucratic inertia; and a shortage of new investments in building human capacity, and physical infrastructure to improve potable water supply services.

This study establishes that there is a shortage of water supply, albeit in different proportions due to contextual factors, in all the studied cases. This water shortage was found to be the result of poor governance. Thus water shortages and increasing pollution are to a large extent socially and politically induced challenges.

Exclusion of people at the grassroots level and other stakeholders in the planning and formulation of policy

Analysis of data from the triangulated sources established that people across the board in both Zimbabwe and South Africa had a significant role in the initial stages of embracing the IWRM paradigm albeit they knew very little about its existence elsewhere. They were visionary enough to envisage its superiority to the fragmented approaches forced upon them by years of colonialism. It was those at the grassroots who put pressure on those in power to provide a more equitable and participatory approach to potable water supply governance and distribution. They were thus a push factor in the adoption of the IWRM framework.

Globalisation played an equally important role. Developments in France and other Western countries pointed the way ahead and were used by the wealthy overseas donors as benchmarks and standards for accessing financial, equipment and technological aid.

A combination of these push and pull factors laid the foundation for the change process. Nonetheless, these forces were not properly meshed and thus local stakeholders (especially those at the grassroots) were soon sidelined in the formulation and adoption of the new policy framework. Having laid the foundation for the change process in the water sector as shown above, the people soon lost the driving seat to international forces in the planning of the change process. This is how the change process became an imposition from above. What the local ruling elite did was to embrace the change processes from the external forces, (along with the very useful funding) forgetting and suppressing internal forces that had previously been at the forefront of reform.

The final conclusion is thus that stakeholders, especially at the grassroots, have been largely sidelined in the formulation and adoption of potable water supply policies in both Zimbabwe and South Africa. They laid the foundation for a pro-grassroots change process, but lost the initiative to powerful international forces once the reform process took off. The opportunity for pro-grassroots forces of change in the potable water supply governance was lost. The challenge was, and still is, an alignment with and adaptation of international forces to local and national demands for contextualisation and meaningful development that benefits the people.

Due to the diversity of water related activities, the complexity of the geohydrological environment and the deteriorating physical environment, the function of the water service providers in the respective municipal areas now calls for specialised skills and knowledge.

Weak policy and institutional framework

It has been established that both countries forming part of this study have adopted the IWRM framework and have formulated policies and legislation in line with the new thinking. The major problem with the new policy and institutional framework, however, is that it is highly fragmented as established in chapters 4 and 6 of this thesis. This has also blurred issues of accountability, answerability and responsibility. For example in Zimbabwe ZINWA is supposed to be the central authority that facilitates water supply to municipalities, councils and other local authorities. Nevertheless, from 2005 to 2009 it took over the management of potable water

supply to consumers in most major urban centres. As already shown in chapter 4 of this thesis, this move has caused confusion and more problems for the consumer.

There are also issues of fragmented legislation, ministries and other administrative institutions. For example in Zimbabwe water legislation includes the Water Act of 1998, the Zimbabwe National Water Authority Act of 1998, the Natural Resources Act of 1941. In South Africa there is the National Water Act of 1998, the Water Services Act of 1997, the Municipal Systems Act, the Municipal Structures Act of 1998. This has translated into a lack of coordination and uniformity in areas of responsibility. As a result, there is a considerable overlap of institutional mandates. For example, the Natural Resources Act of 1941 in Zimbabwe provides for the construction of works to prevent soil erosion and promote the conservation of soil and water resources, and as observed by Patel (2002: 15), with reference to water development and usage, it reflects several potential conflicts of an administrative nature vis-à-vis the provisions of the Water Act of 1998.

In both countries it has been a complex task to address cooperative governance between the national, provincial and local spheres of government. It has been established that the geographical and institutional boundaries of water management bodies by and large follow hydrological boundaries without taking political and administrative boundaries into consideration. This has tended to split communities. Thus, clear-cut jurisdictional responsibilities between the catchment and sub-catchment councils, water user boards, water point committees and rural district councils, still need to be clarified. The city of Tshwane (discussed in chapter 5) of this thesis, whose jurisdiction area cuts across two provinces, is a case in point.

In the final analysis, while the framework for a perfect water management system seems to exist in Zimbabwe and South Africa, the situation on the ground does not reflect this. There is confusion and lack of proper coordination amongst the different authorities and institutions that have a bearing on the management and development of water resources.

Lack of political will resulting in insufficient allocation of resources to the development and improvement of potable water infrastructure

Potable water supply does not receive the priority it deserves in national budgets. As a result, there is a lack of finances to maintain water delivery systems, especially in Zimbabwe where the adoption of the new framework coincided with the emergence of a new political landscape. The ruling party became not only schizophrenic, but extraordinarily violent. It mobilised all national resources towards its political survival. This resulted in the withdrawal of overseas donors (note that water reforms in Zimbabwe depended on external donors) before water reforms were stabilised.

As discussed in chapters 5 and 6, when all the urban communities in Zimbabwe dumped ZANU PF for MDC, the government reacted by centralising water governance to rob urban municipalities of their major source of income. This resulted in further deterioration of water supply services culminating into the 2008 - 2009 cholera outbreak in most major cities of Zimbabwe.

It has also been noted in chapter 3 that the Zimbabwean government was adding to its expenditure on military interventions in other countries, in particular the DRC, when there were no public funds available for reticulation and sanitation systems. In addition, powerful individuals or groups have been seen to hijack the process for their own selfish benefits.

Lack of motivation and training

It was established in chapter 6 that whenever new systems are introduced there is need to motivate and train people on how to work with them. The above sections show that residents of the municipal areas that were under review are not even aware of the term IWRM. If they are to participate fully in the programme they have to be educated about its ramifications. The new water programme was destined to fail because the leadership in Zimbabwe was not committed to its implementation beyond the political mileage it would give them. IWRM was apparently embraced to impress the overseas donor community and get the much needed financial support. When political survival was threatened nobody seemed to care, and in practice all the good intentions were jettisoned. As noted in chapter 6, the leadership still speaks in eloquent but

meaningless terms of IWRM, but they themselves have no idea what it is all about. Currently there is neither training nor motivation to ensure professional and serious implementation of IWRM. The biggest challenge is thus the attitude of the political leadership. Even in the early days (when the reforms were introduced), ZANU PF politicians seemed obsessed with politics and tried to grab every opportunity to turn community gatherings into political rallies.

South African leadership seems a bit more motivated and committed but are guilty of taking people for granted. Here too, this study established that people are unaware of IWRM and the catchment management system, at least in the studied cases. The leadership would do well to undergo some training and get motivated themselves so that enthusiasm and commitment filters down to other stakeholders and the general masses.

A technocratic approach to potable water resources management is still dominant

It has been established that the majority of grassroots stakeholders are ignorant of the IWRM conceptual framework and related concepts. Most questionnaire respondents believed that potable water supply authorities are more important than consumers, a belief that is apparently also held by the water sector authorities themselves. They talked about IWRM, demonstrated that they understood what it is all about, but their attitude was clearly still aligned to the traditional way of doing things. In fact, IWRM appears to exist in theory but not in practice. Even some of the research assistants became aware of IWRM by their participation in this study. Prior to their respective roles in this data collection exercise, they knew nothing about IWRM.

Most grassroots respondents felt that government and municipalities were not doing enough to ensure availability and accessibility of potable water to all residents. They were not concerned that they were not involved in the public decision-making process, but they were worried that authorities were not doing enough to ensure that sufficient potable water is effectively delivered. Even their solution to the problem was based on a technocratic worldview. They suggested that the government should provide financial resources for the construction of more (and bigger) dams; the drilling of additional boreholes; laying of new water pipes; identifying water leaks; providing purification chemicals, and so forth. Whilst all this is indeed required, even in the new framework, the problem is the emphasis on the technical matter at the expense of the crus of the

issue – managing the existing systems and infrastructure efficiently. Stakeholders and the authorities seem unconcerned about soft issues of governance (such as their involvement, integration of water governance to the whole development effort and water demand management). Authorities and residents of the municipal areas should also come up with strategies of utilising potable water more sparingly and wisely. As observed in chapter 3, treated and reticulated water should not be used for flushing toilets

Low use of websites

South African websites are highly advanced and educative. Zimbabwean websites are still under construction. It is important to note that most municipal inhabitants in both countries have no Internet; the majority do not have financial resources to use the Internet. As a result the available information on the websites is useless because it does not reach the majority of its audience. This being so, websites are currently not promoting communication; there is still a long way to go before Africans, (especially the elderly, who have not had the opportunity to gain access to these modern technologies, and are more set in their ways), are able to access information on the internet financial and other resources limitations. In most cases, only academics and professionals are using the internet gainfully.

Commenting on websites and information and communication technology (ICT) utilisation in Zimbabwe, Kabanda (2011: 17) observes that the critical elements for information and communication technology for development (ICT4D) in Zimbabwe are:

- access to ICTs;
- ability to use ICTs;
- actual use of ICTs; and
- the impact of using ICT in economic growth.

On the utilisation of the Internet and websites in both Zimbabwe and South Africa, one would raise the same issues, namely access, ability, actual use and impact of use. This study established that whilst actual use of municipal websites and the Internet would have positive and improved utilisation of natural resources (in this case potable water), the majority of municipal residents

neither have access to internet nor the ability to use it. Figure 7.1, Figure 7.2 and Figure 7.3 show the trend in the use of the Internet and mobile telephones in eastern and southern Africa.

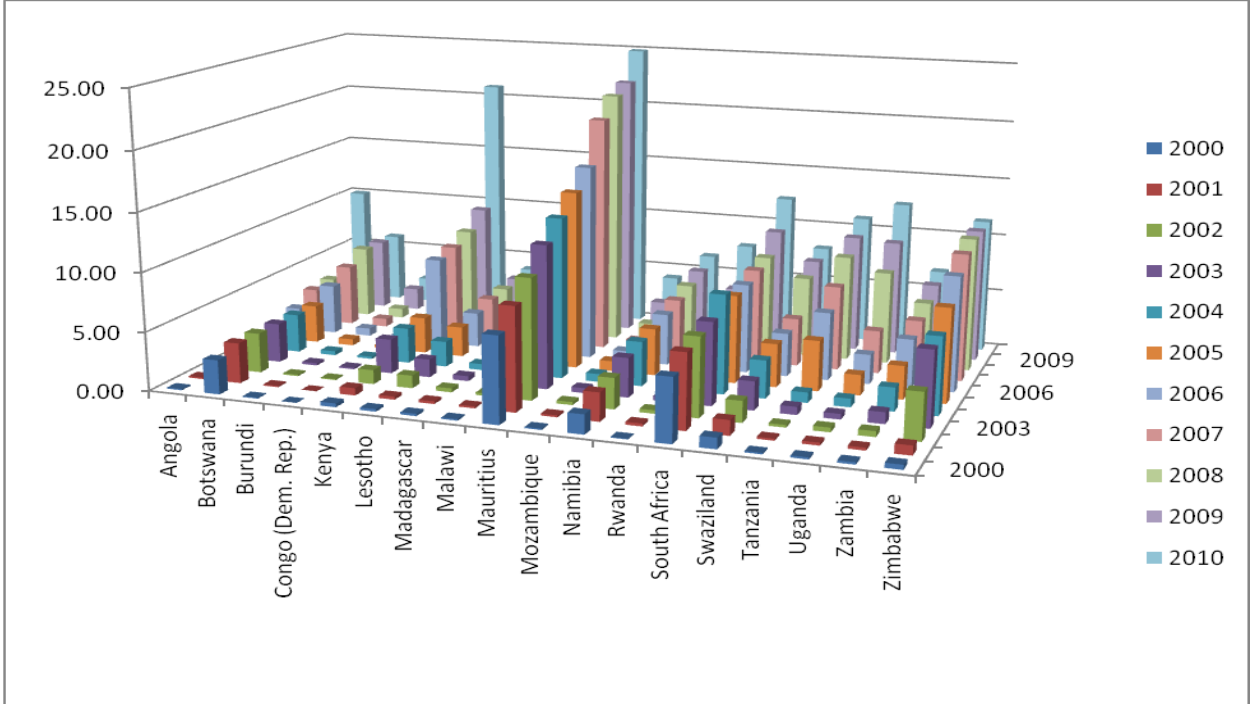


Figure 7.1: Number of internet users for eastern and southern Africa (2000-2010)

(Source: Kabanda, 2011: 29)

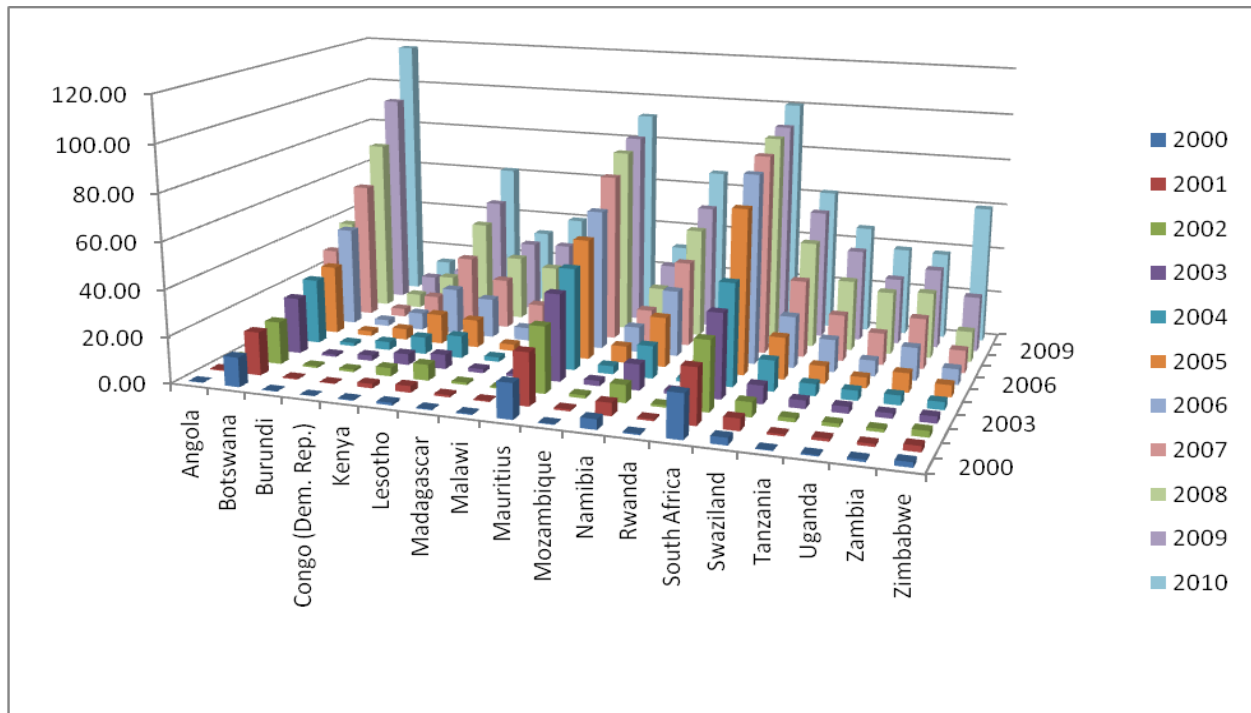


Figure 7.2: Number of mobile users for eastern and southern Africa (2000-2010)

(Source: Kabanda, 2011: 30)

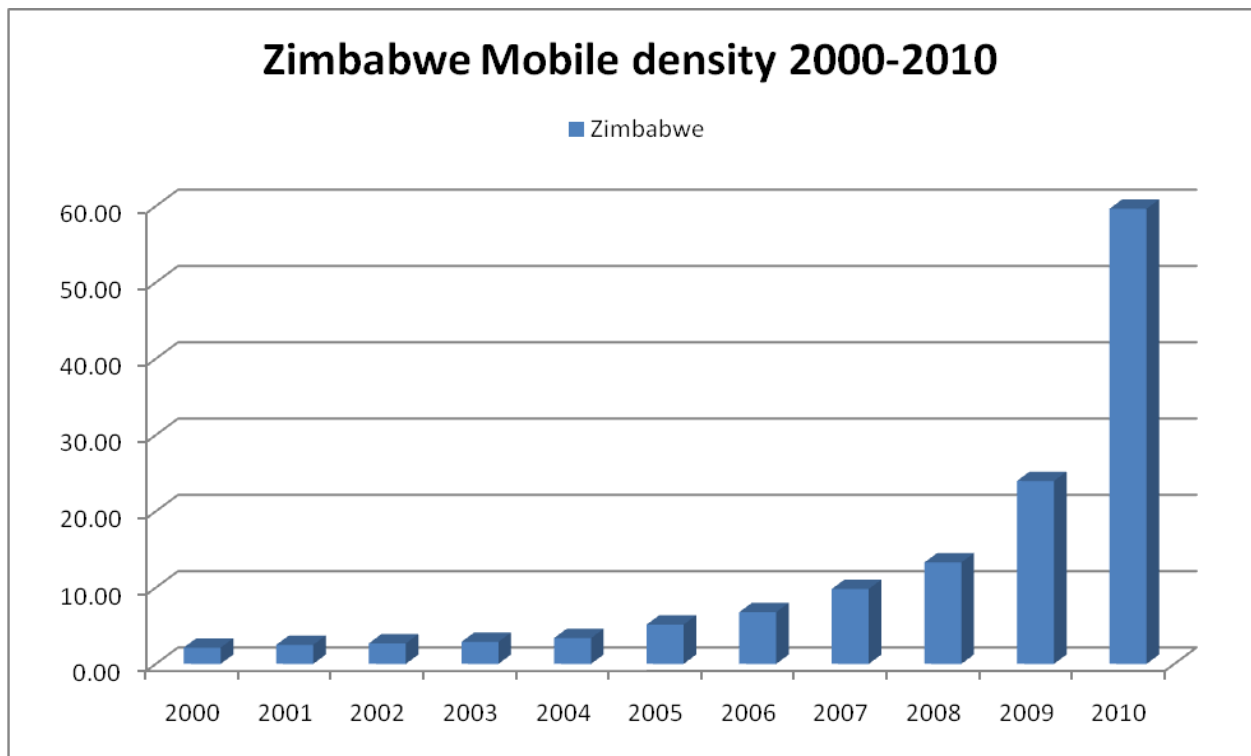


Figure 7.3 Mobile density for Zimbabwe (2000-2010)

(Source: Kabanda, 2011: 31)

Figure 7.1, Figure 7.2 and Figure 7.3 show that there is a generally low adoption and utilisation of ICTs in both Zimbabwe and South Africa although the situation in South Africa has been comparatively better than that in Zimbabwe in the past decade. However, with the stabilisation and recovery of the Zimbabwean economy, Zimbabwe is fast catching up and even overtaking South Africa in this regard. The implication is that municipal authorities should not only make use of websites and other ICTs in their management of potable water supply services and communication with stakeholders, but train their municipal employees and their external stakeholders (especially municipal residents) in ICTs for effective grassroots and stakeholders involvement in municipal public management and governance processes.

Divergent perspectives: government versus stakeholders

It seems some government officials treat water as a political tool whereas those at the grassroots level see it as a necessity. This results in political interference. In a bid to retain popularity (and thus votes), politicians aim to keep the price of water as low as possible. In chapter 4 it was established that in Zimbabwe politicians have frustrated the implementation of the pricing policy. The outcome of this is that water service provision has suffered because municipalities cannot afford to maintain high standards of water service delivery. Commercial defaulters of payment for water permits are being protected against disconnection through the influence of politicians. This has resulted in lack of enforcement of the new policy framework.

Economic disability and weak financial base

As far as utilisation of resources is concerned, potable water included, Africa suffers from economic disability. High poverty levels mean failure to implement the new policies simply because they require some financial investment. It has already been shown that Zimbabwe previously depended heavily on the donor community for financial assistance to implement the new policy framework. When they withdrew for political reasons the project came to standstill.

The interviews with potable water executives in Harare and Masvingo revealed that the municipalities did not have money to improve infrastructure or organise residents and

stakeholders workshops. For example Mr. T. Gozo and Mr. R. Murimoga reported that Masvingo Municipality's 2010 total revenue base did not exceed US\$10 million, yet the water infrastructure rehabilitation and upgrading to meet 2010 requirements was estimated at US\$30 million plus.

The gap between policies and practice

The major purpose of this study is to build a multi-stakeholders systems theoretical framework that would help in bridging the gap between policy and practice in potable water governance in the two countries as represented by the selected cases. The study established that policy and practice were moving in parallel directions in the studied municipalities, especially those in Zimbabwe. With the deterioration of the political climate in Zimbabwe, policy became merely decorative. Residents' and workers' questionnaires revealed that water authorities simply made unilateral decisions even without involving their more junior colleagues. Thus policy and practice moved in opposite directions. The major argument in this study is that policy makers should blend global push factors and internal pull factors to ensure that water reforms benefit their constituent population. The complex multi-stakeholder systems theory requires an in-depth evaluation of the situation so as to come up with the best fit taking cognisance of the fact that whatever happens on any of the angles of the multifaceted system has profound effects on the total system. Thus the management and governance systems so developed should not only be proactive but should also be based on a thorough analysis and understanding of the entire system.

Challenges in bridging the gap

Some of the challenges in bridging the gap between policy and practice are as follows:

- lack of financial resources and modern technology;
- technological illiteracy as in cases where residents cannot access municipality websites because they do not have the technical skills;
- political survival given precedence over developments that benefit the people;
- the deep-rooted technocratic approach to potable water management;
- politicians dominate instead of professionals and the wider public;
- weak policy and institutional framework;

- poor governance and mismanagement;
- lack of commitment and motivation on the part of the authorities;
- the municipality of Harare (for example) draws its water from the same source into which its waste water flows;
- the management of water resources is not integrated (water supply and sanitation management are treated as separate entities);
- water sources are polluted by cemeteries, sewage, industrial and commercial waste, agricultural manure, fertilizers and other chemicals;
- rapid population growth has not meant a corresponding improvement in infrastructure;
- low annual rainfall;
- management of potable water supply is just an appendage of public works and planning divisions; and
- in some cases as in the city of Masvingo, the management of water resources and sanitation has no manager (the post is vacant);

7.2.3 The central argument conclusions

This study hypothesised that:

- Although the principles and practices of water management are largely dependent on local conditions and geohydrological complexities, the water sector reforms and services in Zimbabwe and South Africa have more commonalities than different 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 prioritization of potable water supply, translated into a poor policy implementation and enforcement, and the lack of proper 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, and the effectiveness and efficiency of the existing water frameworks and institutions.

Based on qualitative analysis and discussions in the previous chapters, especially Chapter 6, the first, second and third hypotheses are accepted. The fourth hypothesis is a case of both accepting and rejecting. South Africa is economically and technologically more advanced than Zimbabwe and discussions in the previous chapters show that potable water governance in South Africa is better than that in Zimbabwe. It is however important to note that in terms of embracing IWRM there is not much difference. Stakeholders, especially grassroots participation is weak in both countries.

7.2.4 Overall conclusion

It can therefore be concluded that, according to the findings of this study, the demands of IWRM in the two countries, as represented by the selected case studies, are not properly adhered to and therefore not implemented as per the much talked about framework. This study found that the major excuse for not adhering to the dictates of the adopted policy (IWRM) and the ambient legislative framework was found to be unavailability of resources. Despite the resources excuse, it was established that in all the selected study cases government and local authorities are not fully committed to the change processes for political reasons (especially in Zimbabwe). In the final analysis, this study thus agrees with the claim that it is not simply lack of resources that is preventing the implementation of the new holistic approach to water governance (IWRM), but poor mobilisation and mismanagement of the available resources. As discussed in chapters 3 and 4 of this thesis, the main challenge is neither water stress nor scarcity of water. The problem lies at the door of those responsible for the governance of potable water supply. Water stress and scarcity are symptoms of the overall poor governance of natural resources that are, after all public property. The running theme in this study is that lack of basic services is due to mismanagement by those in authority; the high levels of corruption in the ranks of water governance; the lack of appropriate institutions; the cancer of bureaucratic inertia; and a shortage of new investments to ensure that human capacity and physical infrastructure are improved with regard to potable water supply services. As observed by Savenije (1998: 1):

There is enough water, virtually everywhere in the world, to provide people with their basic water needs: drinking, cooking and personal hygiene. Shortage of water for primary purposes (essentially household water) is much more a problem of lifestyles and poor management than of water availability.

Thus WWAP/UNESCO (2006:29) is correct in its stance that a basic insight, which has not yet garnered enough attention, is that the insufficiency of potable water supply and sanitation is primarily driven by an inefficient supply of services rather than by water shortages. Water shortages and increasing pollution are to a large extent socially and politically induced challenges. The water crisis is thus increasingly about how people, as individuals, and as part of a collective society, govern the access to and control over water resources and their benefits.

7.3 RECOMMENDATIONS

Based on the discussions in the literature review chapters and the findings and conclusions discussed in chapter 6 of this thesis, this study provides a wide range of recommendations. These are as outlined below.

Take a holistic approach using a multidimensional stakeholder philosophy

Firstly, as already concluded in the basic conclusions of this study, public management issues must not be considered in isolation, but in their total context. This research has established that public management processes are living systems composed of the external interface and internal subsystems. Anything that affects one part of the system also interacts with the other parts. Thus, issues must not be considered in isolation, but in their total context. The implication is that in the modern world where emphasis is on globalisation, practitioners, policy makers and academics have to be careful that they do not get carried away by the globalisation noise and forget other subsystems that make the whole, because the whole is greater than the sum of its components.

Water laws must be enforced

This study established that there is lack of enforcement of water laws. As observed by Kwabena (2009: 2) and discussed in chapter 3 of this thesis, Africa is suffering from the disease of public policy implementation failure. To cure this Kwabena recommends strengthening of operational mechanisms in areas where arrangements have not yet been properly set in place, and refinement of public strategies and policies where these are needed. But this must be done only insofar as they sharpen the high-level commitments that have already been made. Thus, if laws that govern

potable water supply are to have any meaningful impact they must not only be subjected to refinement - they must also be adhered to. Otherwise they are mere decorations.

Build partnerships and avail incentives that will draw investment for the construction of the required infrastructure and technology:

It has been established that potable water is not readily available and therefore not always accessible to residents. The major reason for this state of affairs has been traditionally identified as scarce resources. This study suggests a number of strategies to deal with the meagre resources issue. Municipalities should engage with other stakeholders such as the business community, international organisations and NGOs, among others. The business community may, for example, be prepared to take on the task of constructing the required infrastructure if offered the incentive of collecting rent/ rates from users for some period (for instance 10 years) before handing over the project to the authorities (a BOT or build-operate-transfer strategy). Alternatively, to give another example, business organisations could be exempted from paying taxes. There may also be twinning arrangements with other cities that have advanced economies. Such arrangements will come with human and technology transfer arrangements that benefit both sides. International humanitarian organisations and NGOs may also be mobilised and encouraged to work with the people at the grassroots in empowerment programmes and infrastructure development. For example, a good opportunity arose at the time of the 2008 - 2009 cholera outbreak in Harare when humanitarian organisations were mobilised into assisting in the improvement of the ageing and obsolete water infrastructure. This approach would certainly allow the development of a multidimensional stakeholder approach which is a version of IWRM as discussed in chapter 1 and chapter 2 of this thesis.

Municipalities and local councils should embark on entrepreneurial ventures

Local authorities should find the means of subsidising public services (water supply services included) through entrepreneurial ventures like investing in municipal road and rail public transport, municipal construction services, providing specialist consultancy, and so on. Proceeds from these ventures will assist in ensuring that people get adequate (or even world class) public services at low and affordable rates. However, these ventures require professional management and accountability; otherwise they will degenerate into an extra burden to residents who will be

forced to sustain them with additional levies because they may fail to sustain themselves due to mismanagement and corruption.

Respect stakeholders, use their brains and world of experience:

It has been established that although the grassroots were intimately involved in laying the foundation for change and improvement of potable water governance in both Zimbabwe and South Africa, they were soon pushed to the periphery of the change process. Yet these people have a wealth of knowledge that could be used to the benefit of the communal governance process (see chapter 3 and chapter 4 of this thesis). As demonstrated in chapter 6, marginalising the grassroots to the periphery of common pool resources governance processes stifles their initiative and makes them passive dependants who merely look to government and municipalities to make water available to them. Thus, a multi-dimensional stakeholder involvement approach which ensures that all residents have a say in the management and development of community and municipal potable water resources should be encouraged.

Policy and institutional framework should be simple and boundaries well demarcated to ensure proper coordination

It has been established that policy and institutional frameworks are subject to a wide range of laws, ministries, ill-defined geographical areas, and so forth. This is the outcome of confusion, lack of accountability, unnecessary dysfunctional conflict and poor service delivery, among other ills. There is thus a need for a sober and well-defined policy and institutional framework.

Political will, commitment and motivation must be heightened

The political leadership has to understand and identify with the entire process. It has been established in the course of this study that Zimbabwean ruling party politicians did not prioritise the implementation of the new potable water governance framework. Adopting the new framework was no more than a ploy to strengthen their position. When the political environment posed a threat their days in government they quickly shelved the reform process for political survival. This shows lack of commitment and poor appreciation of the importance of the reforms in the potable water governance systems.

Encourage increased advocacy and training

In chapter 6 of this thesis it was established that generally speaking, people are not even aware of the IWRM governance framework. There is thus an urgent need for communicating the reforms to the people. They also need to be trained in the new systems so that they understand and actively participate in the implementation of the new policy framework.

Invest in changing the mindset of stakeholders

It has been established that people still have a technocratic approach to potable water resources management. There is a need to change this mindset among stakeholders and role players.

Engage women because they are the primary users and managers of water in the homestead

This study showed that it is women who are responsible for ensuring that potable water is available for domestic use. Improving potable water supply systems translates to an improved working environment for women. They must therefore participate in matters that affect them more than they affect others in our society.

Train people to use modern technology

Technology is changing rapidly. The advent of the Internet and websites introduced a potentially easy method of communication. This opportunity is however hampered by limited skills in using this new technology. It is thus recommended that training of role players and stakeholders in the utilisation of the current communication and information technology be undertaken.

Undertake regular reviews and check-ups

To measure municipal progress and success in the implementation of potable water supply reforms there is a need for follow-ups and performance evaluation. Otherwise the introduced IWRM system will gravitate back into the old sectorial and technocratic water management system. Exchange monitoring processes may be considered. The two countries (Zimbabwe and South Africa) or even municipalities could exchange personnel for monitoring and evaluation purposes. They may simply arrange workshops and symposiums to exchange notes and learn

from each other's experiences and challenges. Regional awards may also be considered since the IWRM framework has been embraced at regional and continental level (see Chapter 4 of this thesis).

Improve professional qualifications of water managers

Water managers have to be professionally qualified to ensure professionalism in the management of potable water supply. Although all water executives interviewed were technically qualified they required some professional qualifications in governance and management. There is also a need to ensure that all management posts are filled as soon as they fall vacant.

The water section should not be part of public works, undivided attention must be on the management of potable water supply

In every case study in this project studied cases water supply services were an appendage of public works. Potable water delivery is too important an issue to be made an appendage of another department.

A collective effort must be made

It has been established that there is a divergence of ideas and impressions between government and other stakeholders. As already seen, the authorities are not walking the talk. Projects and programmes are imposed upon the people rather than undertaken with the people or by the people themselves. There is thus a need for mobilising collective effort to ensure full ownership of the whole water reforms process by all stakeholders and role players.

'Walking the talk'

Chapter 6 of this thesis showed that there is no alignment between policy and practice. Legislation and what policy makers say is one extreme end and practice is at the other. There is no link between the theoretical framework and what is happening on the ground. There must be an alignment of the two pillars of public policy making and practice in both these countries.

Further studies are required

The study was largely a case and community development study. For such studies to be effective in ensuring improvement in the development endeavour, they have to take a participatory approach so that participants' skills are sharpened during the research process. Participatory approaches, especially in-depth interviews and group discussions, also help both the researcher and the research subjects to create rapport and read between the lines of what is being communicated. This research tended to be largely a survey in character with some limited participatory characteristics. However, it benefited from the largely hybrid design as already outlined in this chapter. It is therefore recommended that:

- a more detailed and deeper participatory study be carried out with other major cities and other rural communities in the two countries;
- related comparative studies in other countries in the SADC region be conducted; and
- regional comparative studies (e.g. SADC versus ECOWAS) be undertaken.