

**An assessment of private sector participation as a viable  
alternative for improved urban water provision in Zimbabwe:  
The Case of Harare Municipality**

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*Thesis presented in partial fulfillment of the requirements for the degree Master of Public  
Administration in the Faculty of Economic and Management Sciences (School of Public  
Leadership) at Stellenbosch University*

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**March 2013**

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## **ABSTRACT**

This study gives an analysis of urban water services provision in Zimbabwe in general. The case study of Harare Municipality was used to get an in-depth analysis of urban water provision in an urban set-up and assess the possibility of private sector engagement for water provision. The engagement of the private sector through Public-Private Partnerships (PPPs) in the provision of public services has become a common practice in many countries. The overall benefits noted for the use of these partnerships include increased effectiveness and efficiency of service delivery. The private sector has been favoured for the provision of services, given the financial and expertise benefits that it brings into public service delivery. Water services delivery in many countries in Africa has been dogged by a plethora of problems that include, water losses, poor revenue collection, lack of cost recovery, inadequate financial investment to expand water infrastructure and overall inability to meet demand resulting from urban expansion. Given these challenges, PPPs provide an option for service delivery. These partnerships have been in the form of leases, management and service contracts, as well as concessions for the provision of public services.

Private sector participation (PSP) in service delivery in different forms is rooted in various theoretical ideologies that include New Public Management (NPM), Public Value, New Governance and Network Governance. The reduction of the role of government in the provision of public services; the adoption of private sector management style; the use of networks in service provision and participation of the stakeholders are key principles in these theoretical ideologies. These principles have thus been adopted through public sector reforms for service delivery.

Case studies from Senegal, Kenya, South Africa and Tanzania are applied in this study, to take note of key lessons on the engagement of the private sector for provision of urban water services, as well as the key determinants of successful partnerships. The institutional and legal framework of reforms undertaken in these countries are analysed as part of the enabling environment for successful partnerships. Data collection for this

study was done through key informant interviews, covering water administration issues, water provision challenges and private sector engagement in Harare.

The obsolete water infrastructure and inadequate financial levels have affected water provision and coverage in Harare. Unaccounted for water was found to be above 30 percent for the City of Harare, whilst water production levels are much lower than demand. Attempts at engaging the private sector for improving water provision through a concession for the Kunzvi Dam Project have not gone beyond the signing of the contract. What is clear is that there is a lack of a regulatory framework; political willingness, lack of trust, economic uncertainty, lack of financial sustainability and a performance monitoring framework. These are key factors in ensuring a viable public-private arrangement. For private sector involvement to be successful, in the context of this study, the recommendations include the need for a regulatory framework for PPPs in Zimbabwe, establishment of a regulator through policy, political willingness and transparency.

## OPSOMMING

Hierdie studie bied 'n algemene analise van stedelike watervoorsieningdienste in Zimbabwe. Die gevallestudie van die Harare-munisipaliteit word gebruik ten einde 'n in-diepte analise van stedelike watervoorsiening in 'n stedelike omgewing te bekom en om die moontlikheid van privaatsektor-betrokkenheid ten opsigte van watervoorsiening te assesser. Die betrokkenheid van die privaatsektor deur middel van Openbare-Privaatvennootskappe met die oog op die verskaffing van openbare dienste het in vele lande wêreldwyd algemene gebruik geword. Die algehele voordele vir die gebruik van sulke vennootskappe sluit verhoogde doeltreffendheid en deeglikheid van diensverskaffing in. Die privaatsektor geniet voorkeur vir die voorsiening van dienste gegewe die finansiële en kundigheidsvoordele wat dit aan openbare dienslewering toevoeg. Die lewering van waterdienste in vele lande in Afrika word deur 'n oormaat probleme geteister wat waterverliese, onvoldoende betalings, gebrek aan kosteverhaling, onvoldoende geldelike beleggings om waterinfrastruktuur uit te brei, en die algehele onvermoë om aan die aanvraag weens stedelike uitbreiding te voldoen, insluit. In die lig van die vermelde uitdagings bied Openbare-Privaatvennootskappe 'n opsie vir dienslewering. Dié vennootskappe is in die vorm van huurkontrakte, bestuurs- en dienskontrakte, sowel as konsessies vir die verskaffing van openbare dienste, vergestalt.

Deelname deur die privaatsektor aan dienslewering in verskillende vorme is gewortel in verskeie teoretiese ideologieë wat Nuwe Openbare Bestuur, Openbare Waarde, Nuwe Leiding en Netwerkleiding insluit. Die vermindering van die regering se rol in die voorsiening van openbare dienste; die aanvaarding van privaatsektor-bestuurstyl; die gebruik van netwerke ten opsigte van diensverskaffing en die deelname van belanghebbendes, is sleutelbeginsels in hierdie teoretiese ideologieë. Hierdie beginsels is dus deur openbare sektorhervormings met die oog op diensverskaffing aanvaar.

Gevallestudies uit Senegal, Kenia, Suid-Afrika en Tanzanië is in hierdie studie toegepas met die oog daarop om sleutellesses rakende die betrokkenheid van die privaatsektor ten opsigte van die voorsiening van stedelike waterdienste ter harte te neem, sowel as

die sleuteldeterminante van geslaagde vennootskappe. Die institusionele en wetlike raamwerk van hervormings wat in vermelde lande onderneem is, is geanaliseer as deel van die geskikte omgewing vir geslaagde vennootskappe. Data-insameling vir hierdie studie is gedoen deur sleutel ingeligte onderhoude wat wateradministrasie-aangeleenthede, watervoorsiening-uitdagings en privaatsektor-betrokkenheid in Harare dek.

Die afgeleefde waterinfrastruktuur en onvoldoende finansiële stelsels het watervoorsiening en dekking in Harare geraak. Daar is bevind dat die onverantwoordbaarheid ten opsigte van water in die stad Harare bo 30 persent was onderwyl waterleweringsvlakke veel laer is as die aanvraag daarvoor. Pogings om die privaatsektor te betrek by die verbetering van watervoorsiening deur middel van 'n konsessie vir die Kunzvi Dam-projek, het nog nie verder gevorder as die kontrakondertekening nie. Wat duidelik is, is dat daar 'n gebrek aan 'n reguleringsraamwerk bestaan, daar is geen politieke wil nie, daar heers algemene gebrek aan vertrouwe, ekonomiese onsekerheid en 'n gebrek aan finansiële volhoubaarheid, en daar bestaan nie 'n prestasiemoniteringsraamwerk nie. Hierdie is sleutelfaktore ten einde 'n lewensvatbare openbare-private ooreenkoms te verseker. Om privaatsektor betrokkenheid – in die konteks van hierdie studie – geslaagd te maak, sluit die aanbevelings die volgende in: die behoefte aan 'n reguleringsraamwerk vir Openbare-Privaatvennootskappe in Zimbabwe, die totstandkoming van 'n reguleerder deur middel van beleid, 'n politieke wil en deursigtigheid.

## **ACKNOWLEDGEMENTS**

I give all honour and glory to you my Lord and Saviour Jesus Christ who strengthens me. Through whom all things are possible.

My sincere gratitude and thanks goes to my loving husband and friend, Romualdo, for being my pillar of strength. Thank you my love for encouraging me and believing in me throughout the process of undertaking this study. Hugs and kisses to my lovely children, Tristan, Benedict and Romualdo for being my inspiration.

Special thanks go to my supervisor Professor Kobus Muller, for the support and commitment you gave me. It was a long journey made easy by your support.

I would also want to thank the staff of Harare Municipality, Ministry of Economic Development, Combined Harare Residents Association, Ministry of Water Resource Development, Infrastructure Development Bank of Zimbabwe, Zimbabwe National Water Authority and Institute of Water and Sanitation for being responsive, approachable and opening your doors to me. Be blessed always.

Elizabeth Rudairo, it was not all in vain after all, my little angel. Thank you for inspiring me.

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## **ABBREVIATIONS**

ASD- Alternative Service Delivery

BODC- Borough of Dolphin Coast

CC- Catchment Council

DAWASA- Dar Es Salaam Water Supply Authority

EIA- Environmental Impact Assessment

ESAP- Economic Structural Adjustment Programme

IMF- International Monetary Fund

JMP- Joint Monitoring Programme

MDGs- Millennium Development Goals

NAC- National Action Committee

NAPAWO- National Water Policy

NGOs- Non Governmental Organisations

NPM- New Public Management

NRW- Non Revenue Water

NWCPC- National Water Conservation and Pipeline Corporation

OECD- Organisation for Economic Cooperation and Development

PPPs- Public Private Partnerships

PPSRC- Presidential Parastatal Sector Reform Commission

PSIP- Public Sector Investment Programme

PSP- Public Sector Participation

SAP- Structural Adjustment Programme

SCC- Sub Catchment Council

SDE- Sénégalaise des Eaux

SONEES- Société Nationale d'Exploitation des Eaux du Sénégal

STERP- Short Term Emergency Recovery Programme

UWSA- Urban Water Supply Authority

VAC- Vulnerability Assessment Council

WHO- World Health Organisation

WRMS- Water Resource management Strategy

ZIMVAC-Zimbabwe Vulnerability Assessment Committee

ZINWA- Zimbabwe National Water Authority

## CHAPTER 1

### Introduction and Research Overview

#### 1.1 Introduction to the study

For the past three decades, governments globally have been faced with public service delivery challenges. As a consequence, they have been looking at alternative ways to provide efficient, reliable and transparent services to the people. The agenda of most governments has been focused on improved service delivery, leading them to pursue alternative routes to improve service provision to the general populace. Initiatives have included, decentralising service delivery through local government structures and also through partnering with the private sector.

The urban water sector, generally presents difficult economic and political choices for governments the world over (Kayaga, 2008:147). The provision of water, among other services, provides significant economic benefits within a country in general and for local governments in particular. Historically, the provision of adequate, reliable and accessible supplies of water has been pivotal for the sustenance of burgeoning modern towns and cities. Free or affordable access to water has spurred a variety of other uses ranging from maintaining lawns to backyard vegetable gardens. It is agreeable that the utilisation and management of any country's water resources is critical to both its human development and economic development. The provision and management of water could undoubtedly reduce disease and improve livelihoods.

At the same time, the water sector is plagued by a long history of the depletion of fresh water sources and failure to meet demand as urban populations continue to expand. On the international level the significance of water to development is noted. The UN Millennium Development Goals (MDGs) is a good example of an international framework for benchmarking development in countries such as Zimbabwe. One of the



MDGs focuses on reducing by half extreme poverty and the number of people who lack access to safe drinking water by 2015. An efficient, transparent, accountable and cost effective public service delivery is one of the key elements to making considerable strides towards meeting this MDG.

An analysis of the history of the development of urban water provision in Sub-Saharan Africa, shows that state owned enterprises provided services in the water sector since the 1970s to 1990s. However, these enterprises faced inefficiencies and did not expand services to meet the rapidly growing demand (Kayaga, 2008:147). According to Harris (2003:89), state owned enterprises "...could neither expand the water infrastructure adequately to serve the increasing urban population nor could they efficiently operate/maintain existing infrastructure to provide good service levels to the existing customer base..." Hence, international donor agencies, on which most countries in Sub-Saharan Africa have relied on for infrastructural development, called for reforms within the public sector. Planners and policy-makers also came under pressure to optimise the use of water and to develop innovative solutions for sustainable water augmentation and management in the long-term (Sarangi, 2010:45). A plethora of solutions have thus been proposed and adopted for the administration and management of water resources in many countries. Some of the solutions and mechanisms have been successful whilst some have been a failure and this has greatly depended on a number of factors that have included the country context, the legal and institutional arrangements and political and social willingness in each country.

The adoption of different mechanisms and arrangements that include private sector participation in the delivery of services, are part of the public sector reforms for improved public service under the theoretical premises of the 'New Public Management' approach, the 'Good Governance' approach, the 'Network Governance' approach and the 'Public Value' approach. The common and central feature of these ideologies has been a prescription of a new style of public sector management, with key focus on efficiency and the overall reduction of government control of service delivery.

These ideological frameworks provide a theoretical basis for assessing private sector participation in the provision of public services as an alternative mechanism for improved water provision in Zimbabwe. The role of the Zimbabwean government in service delivery will be examined in this study, taking cognisance of the global paradigm shifts in as far as public sector management is concerned.

## **1.2 Reforms in the water sector in Zimbabwe**

Zimbabwe like other countries in Africa, has undertaken some significant changes in the public sector in order to improve service delivery. Of interest to this study are the reforms specifically focused on water service delivery in the country generally and particular to Harare Municipality.

It is important to note, that not a single consolidated document provides the policy framework for provision of water resources in Zimbabwe. The Water Act (Act 31 of 1998) (Government of Zimbabwe (GovZim), 1998a) was promulgated as an amendment to the pre-colonial regulatory framework that allowed for skewed distribution of water along racial lines. The 1998 Water Act heralded reform of the water sector in the country and focused on more equitable distribution of water resources.

According to the Water Resources Management Strategy Steering Group Report (WRMS), (GovZim, 1999:10-12) the goals of Zimbabwe's water reform process are to:

- Promote equal access to water for all Zimbabweans.
- Encourage stakeholder participation and involvement in the decision-making process.
- Adopt an integrated approach to land and water resources planning and management on a catchment basis.
- Enhance the availability of a suitable quality and quantity of water when and where it is needed.

- Project the role water resources can play in poverty alleviation.
- Institute strategies that will promote the production of accurate data on water use and demand for surface waters and groundwater.
- Provide guidelines for private sector financing in the water sector as well as to improve opportunities for self-financing and reduction in public sector financing.
- Institute water pricing policies and mechanisms which recognise water as an economic good.
- Encourage integration of sector and regional water policies.

Decentralisation of water management constitutes only a partial part of the water reform process in Zimbabwe. Other important aspects of this process include national water planning, implementation of different approaches and a shift from the perception of water being a social good to an economic good or commodity. Reflective of this, the Zimbabwe National Water Authority (herein referred to as ZINWA) was created by the government of Zimbabwe “to improve national and regional planning, to obtain needed data and to reduce government spending in the water sector through the levying and sale of water” (Nhapi, 2009:222). ZINWA was established through the National Water Authority Act (11 of 1998) (GovZim, 1998b) as a parastatal, with the mandate to self-fund the provision of water related services. ZINWA also inherited all government owned and operated dams. A notable key responsibility given to ZINWA was the setting of tariffs for all water used for non-primary purposes and the sale of raw and treated water. In essence the ZINWA was to be a streamlined and self-supporting national organisation (Mtisi & Nicol 2003:10).

The conclusion that can be drawn from the above is that urban water services infrastructure in Zimbabwe, has been largely state owned since the 1990s, legalised by the Water Act (31 of 1998) (GovZim, 1998a) also illustrated by the creation of ZINWA as a parastatal to manage the national water resources.

### 1.3 Overview of urban water problems in Zimbabwe

Zimbabwe is a semi-arid country, heavily reliant on regular rains (generally November to April). Mean Annual rainfall is low and many rivers in the drier parts of the country are not perennial. Zimbabwe has made intensive investments in large, small and medium dams, although current utilisation is only about 22 per cent of the annual rainfall (ZIMVAC, 2010:2).

By the later part of the 1990's the levels of service coverage in Zimbabwe were among the highest in Sub Saharan Africa (Nhapi & Hoko, 2010:1282). The authorities in Zimbabwe planned for urban settlement and most areas were provided with water supply. However, the fortunes of the sector have reversed in the past two decades as a result of increase in demand and inability of the overextended infrastructure to cope with rising demand for water, especially in urban areas. Two significant factors, identified by the literature as contributing to the problems of water provision are notably; very limited new investment in services and inadequate revenues of the institutions responsible for service provision, that led to a sustained decline in operations and maintenance of assets (Nhapi & Hoko, 2010: 1283). There was a rapid decline in the quality of water services that were provided along with a reduction in the number of people with access to improved water. There was virtually no new investment in service delivery for most of the past decade (Manzungu & Mabiza, 2004: 1167). Moreover, with only minimal levels of spending on maintenance and repairs, the condition of the existing infrastructure deteriorated steadily.

The progressive decline in water and sewage services, culminated in a serious outbreak of cholera in the 2008 /2009 rainy season, with almost 100,000 cases of cholera and about 4 280 deaths being recorded in the country. In July 2010, 8 569 cases of typhoid were reported in the City of Harare (UNICEF, 2009:68).

Rapid assessments of urban services, undertaken in 2009 by the donor community, give a clear picture of failure of waste water treatment plants, with effluent and raw sewage entering the rivers and dams that provide water to the major cities of Harare, Bulawayo, Mutare, Gweru, Kwekwe and Masvingo. Water treatment plants were found to be dysfunctional and many distribution systems were found to be in need of repair. As service levels deteriorated so too did revenue collections, with unaccounted for water supply between 40 to 50 per cent (ZIMVAC, 2010:45).

The provision of water in urban areas in the country has had its own share of ups and downs, as far as changes in institutional management are concerned. In 2001 the government gave ZINWA the sole authority to manage and distribute water in all urban and rural centers (Nhapi, 2009: 232). However, this deprived local governments of an important source of revenue, since they could no longer cut off water supplies as an inducement for ratepayers to make payments. It is important to note that water income can constitute as much as 40 per cent of council revenues (Coutinho, 2010:71).

Of interest to this study are the arrangements of urban water services, spelt out in the institutional framework. Also, how these arrangements contribute or do not contribute to service delivery. The major urban areas in the country are divided into 31 administrative units that include six cities, nine municipalities, 13 towns and three local boards. Each entity has a statutory requirement to provide water services to their communities. ZINWA has supply responsibilities for water in some smaller towns, but for the major towns, the ZINWA responsibility is restricted to bulk water supply, with the local council responsible for distribution and billing. Given these arrangements in urban areas, it is important through this study to examine if and how these institutional arrangements have impacted on water related service delivery in the case of Harare Municipality.

## 1.4 Rationale of the study

Zimbabwe faces an enormous responsibility in its effort to provide effective and equitable services to the general populace. The lack of adequate water services forms part of the challenges facing the country in general. The dominance of government in the provision of public goods in Zimbabwe has also been blamed for the poor state of water services (Nhapi, 2009:231) It has also been noted that the parastatal (ZINWA) that was created to manage the water sector has failed to meet the expectations of consumers and the government. There has been a failure to expand the infrastructure adequately to serve the increasing urban population and maintain existing infrastructure to provide good service levels to the existing customer base (Manzungu & Mabiza, 2004:1167).

What is clear regarding water provision in Zimbabwe is that without restoration and a strong recovery of the water sector, the country will continue to face the risk of further cholera outbreaks with more deaths, illnesses, negative impacts on livelihoods, industry, tourism, food production and agriculture. Given the changing role of government in efforts to bring about sustainable services to urban populations, it is no longer sustainable for the public sector to continue to own and manage services. Evidently, in some countries the adoption of different service delivery mechanisms, not centered on government have been undertaken to try to circumvent some of the effects of the challenges that the public sector has faced in water services provision.

Studies have shown that there has been mixed arrangements for the involvement of the private sector in service provision, depending on specific ideological strategies adopted to provide services. Key lessons can be drawn from different countries' experiences with private sector participation in urban water provision. These can inform future decisions on specific mechanisms and arrangements that Zimbabwe can adopt. Examples of private sector participation have been through arrangements such as leases, management contracts as well as concessions. There is therefore no one size fits all model and experiences in water service provision have thus been different and

with resultant varied outcomes. This study includes a comparative analysis of the experiences regarding private sector participation in water services in Tanzania, Senegal, South Africa and Kenya. Key lessons are drawn from these countries that will help inform key principles for successful private sector participation arrangements in Zimbabwe.

This background provides justification for this study to be undertaken. It is imperative to look at the current state of affairs as far as water provision is concerned and proposes how best Zimbabwe can also adopt some alternative arrangements for improved urban water provision in general. It is important to recommend the best form of water service delivery that can best suit the Zimbabwean context based on the lessons drawn from other countries. The proposed research would help inform government at both national and the local sphere on feasible arrangements for the involvement of the private sector to improve water related service delivery. Through this research a specific form of service delivery can be explored that is “tailor made” for the Zimbabwean context.

## **1.5 Preliminary literature review**

### **1.5.1 *New Public Management (NPM)***

Public administration of many countries throughout the world has over the past decades entered a new paradigm. The traditional model of public administration has paved the path to a more market- influenced approach of privatisations and deregulation. The New Public Management (herein referred to as NPM) approach has gained great influence in changing and guiding public administration (Ostrom 1996; Stoker, 2006). In essence NPM can be defined as “a set of particular management approaches and techniques, borrowed mainly from the private for profit sector and applied in the public sector” (Batley & Larbi, 2004:32). In particular, it is concerned about introducing reforms in public sector organisations to enable effectiveness and efficiency (Peters, 2001:31).

Another area of concern in NPM is to ensure that public sector organisations provide decision makers with sound advice on all aspects of policy: conceptualisation, review, implementation, monitoring and evaluation (Peters, 2001:32).

This study is specifically guided by the theoretical tenets and fundamental principles of NPM. These focus on markets and competition to promote service delivery efficiency. Market oriented arrangements include contracting, the introduction of user charges, networks between public and private service providers and other ways of private sector participation. According to Batley & Larbi (2004:44), NPM may be seen more as a menu of reforms with different countries adopting different elements of the “menu” to a greater or lesser extent than others.

### **1.5.2 Good Governance**

Literature on the main tenets of good governance also forms part of the literature review for the study. This theoretical ideology is founded on the premise that government cannot do it alone. Governance is therefore collaborative in nature. It is a collaborative effort that involves third parties in addressing public service challenges. New governance recognises the complex relationships of new actors and tools of governance (Salamon, 2002: 4).

### **1.5.3 Public Value**

The Public Value approach also forms a part of the ideological framework upon which some public sector reforms are founded. The approach is based on the work of Moore



(1995). The approach reflects the growing acknowledgement that social values and public participation may not be addressed only through market-oriented approaches.

#### **1.5.4 Public Private Partnerships (PPPs)**

Private sector participation has been noted through what has commonly become known as Public Private Partnerships (PPPs). PPPs have become important means of delivering public services in many countries (Sarangi, 2010:47). As such, the growing interest in the subject has precipitated the growth of academic literature on conceptualising the concept, its impact on economic growth and service delivery and the varied experiences across countries. According to Houghton (2011:77) "...public private partnerships have risen to the forefront of development processes as the global shift towards governance has gathered momentum". Thus, public private partnerships in numerous guises are now a commonly accepted mechanism of urban service provision. Literature on PPPs has point out that these partnerships come about through the recognition that many contemporary problems cannot be solved using traditional mechanisms of government (Houghton, 2011; Rogerson, 2009; Jamali & Yamount, 2007).

There are various PPP management techniques or ways and these include concessions, leases, management and service contracts. The overall aim of PPPs is to meet public needs, which would not have been realized without joint efforts. Through PPPs, the public sector will be able to maintain partial ownership and management of services; avoid accusations of "wholesale" transfer of service delivery to the private sector and at the same time be effective in its role of political accountability to its constituents.

### **1.5.5 *Alternative service delivery mechanisms- country experiences***

Specific country studies have been done by a considerable number of scholars. These give an outline of the experiences of different countries which have embarked on reforms in the water sector. Specific to developing countries, there have been studies of PPPs in South Africa with specific reference to the Nelspruit and Dolphin- Durban water services partnerships (Rogerson, 2009, Sohail, Plummer, Slater & Heymans, 2003, Mukuka, 2006). These studies have looked at the details of the PPPs in these specific areas and how national policy guided the adoption of them. The models of each partnership are also outlined to show the purpose of the arrangements. Ngowi (2006) gives an overview of the performance of PPP for the management of Municipalities in Tanzania whilst Dill (2010) explores the PPP arrangements for water provision in Dar Es Salaam and the positive and negative impact of the PPP arrangement on different development variables that were intended to be addressed. Literature on the country's service delivery mechanisms was explored. Through the examination of case studies from South Africa, Tanzania, Kenya and Senegal, the study was able to ascertain and identify the key elements that have determined the success and failures of each case.

Specific studies on Zimbabwe have mainly focused on the broader analysis of the provision of water in the country with little focus on the participation of the private sector as well as the policy and institutional arrangements to ensure efficient urban water service delivery. So far, literature that has been noted pertaining to water in Zimbabwe includes the work of Musemwa (2010), looked at the changes in water and sanitation in Harare as well as the prevalence of disease as a result of poor management, contamination of water sources and lack of resources. Makurira & Mugumo (2009) looked at water sector reforms in Zimbabwe with specific reference to policy, institutional, coordination and implementation. Mtisi & Nicol (2003) looked at the water reforms and participation of stakeholders in water management processes in Zimbabwe. Worth noting is the work of Nhapi (2009) on the water situation in Harare with specific focus on the policy and management problems. Within the broader literature on service delivery, this study is unique in that it explores private sector

participation in water provision in Zimbabwe and assess if private sector participation is a feasible option for water services provision.

## **1.6 Research problem and objectives**

Municipalities in Zimbabwe are expected to play an important role in service delivery. A factor such as the lack of financial investment threatens the ability of municipalities to deliver water to the general populace. It is important to note that most African countries have undertaken different types of public sector reforms, through different types of mechanisms that include different stakeholders in the respective countries. Zimbabwe, is however one of the few countries that is still using the municipal system solely for service provision. According to Nhapi & Hoko, (2010:1282) "...the major disadvantage of the municipal system is that it is liable to constant political interference at the expense of efficiency, effectiveness and transparency in service provision. It must be realized that efficiency is an important factor in development because poor performance only hurts the poor who in society have no means to have other coping mechanisms". One way of dealing with these challenges is to seek alternative service delivery mechanisms for delivering basic services to all citizens. Thus, the conventional methods of service delivery have to give way to new innovative ways of solving service delivery challenges by using different means and methods.

Issues particularly focused on in this study include, the institutional, regulatory frameworks of water service provision to be put in place for the provision of water in the urban areas in Zimbabwe and how these arrangements have contributed to the challenges facing the water service delivery. Analysis of alternative water service provision arrangements lessons and experiences drawn from South Africa, Tanzania, Kenya and Senegal highlights different reforms adopted by other countries in an effort to improve water provision are considered in this study. The analysis of experiences from South Africa, Tanzania, Kenya and Senegal provides an interesting view on

alternative arrangements and lessons for Zimbabwe to adopt to improve water provision in urban areas.

The research will attempt to answer this research question:

**Can private sector participation be a viable option for improved urban water provision in Zimbabwe in general and Harare Municipality area in particular?**

The specific objectives of this study are therefore to:

- Analyse the current water provision arrangements in Zimbabwe.
- Draw lessons from the experiences in South Africa, Kenya, Senegal and Tanzania to get insight into key elements of successful and unsuccessful alternative service delivery mechanisms.
- Assess how the institutional and regulatory frameworks have allowed for private sector participation in urban water services.
- Examine factors contributing to the water provision challenges in Harare Municipality area.
- Present recommendations on private sector engagement for local government water provision in Zimbabwe.

## **1.7 Research design**

This study is qualitative in nature. It is based on a combination of a case study approach and a cross national comparative of components of water delivery arrangements. It is important to note that a broad analysis of the institutional and regulatory frameworks of the urban water sector in Zimbabwe at a national level was analysed, before the study

was narrowed down to focus on one urban area, namely Harare Municipal area with a sample of 13 residential areas. The case study of the Harare Municipality will be used to provide better understanding of the subject matter and highlight the urban water provision experiences and arrangements within the specific urban area. The case study of Harare will help generate new understanding, explanations on the water provision challenges and factors contributing to these problems, taking into consideration the national institutional arrangements and local government arrangements. A cross national comparative analysis of the different private sector participation arrangements in South Africa, Tanzania, Kenya and Senegal is used to gain insight on how alternative service delivery mechanisms have been adopted to improve water provision.

### **1.8 Research methodology/methods**

Since this research is qualitative in nature, based on a combination of a case study and a cross national comparative component, the research methods that are employed included a mix of multiple data collection methods. These included secondary data analysis and key informant interviews (semi-structured).

The research methodology also used some quantitative data collection on water provision on services delivered in the Harare Municipality, which is the geographical area of responsibility. Water billing, water abstraction, water production and demand were looked at to get a better perception on service provision.

Through the case studies in South Africa, Tanzania, Kenya and Senegal, different experiences provided key lessons for this study. The selection of these countries was based on that these countries implemented different arrangements and each experience was different from the other. According to Benz & Newman (1998:66), the use of case studies in a research has the potential of increasing the validity of results for various reasons. These case studies provide insight into the different yet important factors that may promote improved water provision or hinder it.

Data collected was analysed using the research content analysis. Content analysis is concerned with investigating the contents of documentary and verbal material. Content analysis has been described as being a technique for gathering and analysing the content of the text and it includes books, journals, newspapers or magazine articles, speeches, official documents, films or videotapes, and the internet (Neuman, 2000:292). By identifying themes and issues related to the research topic and question from the secondary data, the researcher is able to analyse and come up with answers to the research question.

### **1.9 Data collection and sampling techniques**

Desk study was used to review existing legislation (Water Act and Zimbabwe National Water Authority Act) in Zimbabwe. Secondary literature on the specific country experiences was also used to examine how and why Tanzania, South Africa, Kenya and Senegal used alternative service delivery mechanisms in the provision of water. Studies already done on each of these countries provide information on whether the models of service delivery adopted in each of these countries was successful. It is also from these studies that lessons learnt can be drawn to inform on how Zimbabwe in general and Harare Municipality in particular can adopt and model its service delivery arrangements. The study of this literature is particularly of importance in getting specific information on institutional arrangements in Zimbabwe pertaining to water provision in urban areas in general and in Harare in particular.

Further data sources included government publications on water services institutional frameworks. In addition, media publications from newspapers, internet articles and newspaper articles were utilized to give more information on the research topic. The facts, perceptions and arguments provided in these sources were drawn together and used to analyse information on the research topic.

Key informant interviews are qualitative in nature and were undertaken to get individual perceptions and knowledge with regards to water provision challenges in Harare Municipality as well as private sector participation in water delivery in Harare. Purposive sampling technique was also used to identify key informants who were interviewed. The following key institutions in water services provided the source from which key informant interviews were drawn:

- Ministry of Water Resources Development and Management.
- Ministry of Economic Development.
- Municipality of Harare.
- Combined Harare Residents Association.
- Zimbabwe National Water Authority.
- Infrastructure Development Bank.
- Institute of Water and Sanitation Development.

Interviews were conducted with key senior personnel in the institutions on specific aspects of the study which included institutional capacity, governments' policy on private sector participation, and customer care in Harare, water billing systems, tariffs and challenges on water services provision in Harare. Specific data collected through the interviews focused on the factors contributing to water challenges in Zimbabwe in general and in Harare Municipality in particular, government's policy on private sector participation in water services and engagement of private sector institutions for water provision in Harare. Two key informant guides which captured; administrative issues and water provision issues (Annexure 1) and private sector participation in Harare water provision (Annexure 2) were used for data collection. A household tool for the collection of data on water availability at household level was also used (Annexure 3). A sample of 15 households per residential area was used for the survey in the 13 residential suburbs in Harare.

## **1.10 Layout of the study**

### **Chapter 1: Introduction and research overview**

Chapter 1 gives an overview of the background, context as well as study objectives of the study. The research methodology and data collection techniques are discussed in this chapter.

### **Chapter 2: The changing role of Government: a theoretical perspective**

This chapter gives an analysis of key theoretical and conceptual issues that inform and give a basis for this study. These include an exploration of the ideological tenets of New Public Management, Good Governance, Network Governance and Public Value. The analysis of the conceptual issues in this chapter forms part of the literature review of this study. Literature on the different arrangements for private sector participation is also explored in this chapter.

### **Chapter 3: Application of private sector participation in urban water provision- some country experiences**

In order put into context the theoretical tenets regarding public services reform, alternative arrangements in water provision are discussed through cross country case studies from Tanzania, South Africa, Kenya and Senegal. The application and models adopted in each country give insight into whether private sector participation arrangements have been successful and the key success elements. The institutional and regulatory arrangements that support the adoption of alternative mechanism of service delivery in each country are reviewed. Lessons from the application and experiences in these countries will be drawn and reviewed.



#### **Chapter 4: Legal and institutional framework for water provision in Zimbabwe**

Chapter 4 reviews the institutional and regulatory arrangements pertaining to water provision in urban areas in Zimbabwe. Key factors regarding the country's institutional arrangements and how these affected water provision in the country in general.

#### **Chapter 5: Key research findings: challenges of water provision in Harare Municipality**

This chapter will analyse the provision of water in Harare. Specific attention will be on whether the provision of water has been adequate, efficient and meeting the needs of people within the City. What have been the contributing factors in the deterioration of water service provision?

This chapter looks at the findings of the research in relation to the feasibility of private sector involvement in water services given the context of Harare.

#### **Chapter 6: Conclusions and Recommendations**

Chapter 6 covers the conclusions and recommendations on key elements for consideration for a beneficial private sector participation arrangement to improve urban water provision in Zimbabwe in general and in Harare Municipality in particular.

## **CHAPTER 2**

### **The changing role of Government: A theoretical perspective**

#### **2.1 Introduction**

This chapter reviews the existing literature on the changing role of government in public service provision. The initial part of the chapter will provide an overview of the key factors that have necessitated public sector reforms globally. The different theoretical perspectives in which public sector reforms are founded are reviewed in the chapter. Key considerations regarding the types of private sector participation through public private partnerships are explored. A review of the key success elements noted in literature is also discussed in this chapter.

#### **2.2 Introduction to Public Service Reforms**

The period from the 1970s to date has witnessed a wave of public service reform in developed, transitional and developing countries which mainly focused on privatisation and commercialization of public services. According to Pollitt & Bouckaert (2004:19), “Public sector reform has been a common experience across the world despite its different forms and foci”. This has been accompanied by a rise in academic literature supportive and critical of these developments and the changing role of government in general. Literature has acknowledged and documented the growth, conceptual framework and specific country experiences of public service reforms for the past five decades. The reforms that were undertaken in different countries included an array of new arrangements of service delivery mechanisms and arrangements, some of which straddle whatever boundaries remain between sectors. There is virtually no limit to the

ingenuity of governments to invent new structural arrangements- and one size does not fit all.

The reforms that have been witnessed in most states were mainly aimed at improving the efficiency of government in service delivery. Minogue (1998:18) noted that the general focus of these reforms has been mainly on “reshaping the boundaries and responsibilities of the state, especially through privatisation, the restructuring of public services and the introduction of private market disciplines into public administration”.

### **2.3 Background to Public Service Reforms**

The discussion between private and public service provision has been ongoing for over a century in world politics and academic circles. The growth of this debate was observed during the course of the twentieth century; the shift has been from public sector confidence, to a popular belief that the private sector style of management is the “panacea” to the ills and challenges faced by the public sector. Notable driving forces of the change from the traditional public sector bureaucratic style of management towards the private sector style of management were the economic crises of the 1970s and 1980s. These crises were attributed to the failure of the public sector. Jooste (2008:3) argues that “these perceptions were the guiding forces that shaped public institutions, firstly the growth of the welfare state, and then the dispersion of neo-liberal reforms”.

The establishment of nation states after the Second World War had at its foundation a conviction in the value of an “extensive state” (Batley & Larbi 2004:10). The period between the 1950s and 1960s consequently was characterised by the consolidation of the power of the state and a focus on internal service delivery, in socialist as well as capitalist countries. According to Jooste (2008:4) “... a later dispersion of the liberal economic view in the West, coupled with a widespread disillusionment of role of the state in development, eventually led to policy transfer to developing nations”. The transference of policy from the developed nations to developing nations was done

through development initiatives or through aid that had some conditionality through what came to be known as structural adjustment loans.

According to Aucoin & Savoie (1998:54), "...by the 1980s, the administrative machinery of Government had become so heavy that its cost led to a progressive and significant indebtedness that forced industrialised nations to undertake major reforms of their public sectors". These reforms consisted of a progressive disengagement of the state from various sectors of activity, such as natural resources management; it then refocused its mission around key sectors such as health, social security, employment and justice.

Criticism against the state had been mounting and after the Second World War, the public generally hailed the change in the role of the state in service provision. The general public hailed the change of the role of the state in that the shrinking of the state would also have a trickled effect in decreasing their tax burden and at the same time the management of public services would be done efficiently. The transformation of the global market through globalisation as well as an increase in new information technologies resulted in taxpayers becoming more open-minded and refined, hence they demanded that government deliver better services (Heeks, 1999:12).

Heeks (1999:13) noted main aspects that increased pressure on the governments to reform, these include, a considerable level of national debt as a result of the financial crises; the growth witnessed in information technology as well as the globalisation of markets and a well informed and more demanding citizenry.

A number of countries embarked on the reform of their administrations in response to the factors discussed above (Osborne & Gaebler, 1992:145). During the 1980s, Britain, being forward-thinking, commenced an enormous drive of the privatisation of public sector entities in order to dismantle governments' role from direct service provision in areas such as transportation, communications, and natural resources to name a few. In France, the development and management contracts of public infrastructure were

awarded to private entities. These included management of water resources, electricity as well as major development or construction projects.

Canada and the United State followed almost similar processes of state disengagement in direct service provision. The transfer of responsibilities once traditionally held by government took the form of sub-contracting and outsourcing between private-sector entities that assumed partial or entire responsibility for delivery of various public services (Donahue, 1989:43). More recently, a trend to explore new models of collaboration for public service delivery, particularly PPPs, has emerged in both industrialised and developing countries.

Though the economic crisis faced in the 1980s can be noted as the fundamental driver for the reforms witnessed in the public sector, it is important to note that, disparagement had already been mounting against public sector service delivery way before the financial crisis. According to Batley & Larbi (2004:3), "...this criticism was based on three broad arguments: the first challenged the view that public administration could be an agent of development, the second emphasised the weakness of the state to enforce policy because it lacked legitimacy, and the third saw the state as being displaced by non-national interests".

The ideology on the need for reform of the public sector was upheld by two important actors in the financial crisis of the 1980s that is the International Monetary Fund (IMF) and the World Bank. These two institutions promoted the philosophy of the "Washington consensus" whose focus was on the liberalisation of the economy and a reduction of the role of the state to improve efficiency in public service provision. The ideology of reform through structural adjustment programmes was soon sold to developing countries undergoing deep fiscal challenges, and conditionally imposed through loans as "structural adjustment programmes".

The structural adjustment programme's objectives were based on the main principles that included; liberalisation (promotion of free markets and opening up of domestic

markets to international competition); the privatisation of state enterprises and public service provision; cutting of state subsidies or safety nets. Based on these principles the prescription or conditions to structural adjustment loans were that there is a reduction or cuts in public expenditure; higher interest rates; abolishment of food subsidies as well as price controls; trade and foreign investment liberalisation (Masunungure & Zhou, 2006:6).

Worth noting was the opposition and reluctance to the initiatives by governments whose influence they sought to reduce (Hirschmann, 1993:114). In addition to this it was noted that it was not clear as to whose responsibility it was to drive such reforms within the developing countries since the initiative towards change was externally driven rather than internally driven as was seen in the developed countries.

#### **2.4 Theoretical underpinnings of Public Sector Reforms**

Several ideologies provide the theoretical basis and justification for the changing role of government in general and for the new approaches in public management of public enterprises in particular. These theoretical ideologies have been fundamental in changing Weber's traditional view of the state. A common thread running through these theoretical streams is the view that government departments were "...tightly structured hierarchies insulated from market forces and from effective citizen pressure and therefore free to serve the personal and institutional interests of bureaucrats instead" (Salamon, 2002:1).

In explaining the changing role of government, Batley & Larbi (2004:4) give a broad outline of the varied theoretical perspectives underpinning thinking in the NPM paradigm that have influenced the reforms in the public sector. These are notably, classical economic theory, public choice theory, principal agent theory, transaction cost economics, and property rights theory.

The classical economic view, which gives the basis upon which neo-liberalism is based, highlights the pre-eminence of markets in the productive and efficient allocation of services and goods in any given state. Therefore, intervention by the state should be limited. According to this view the involvement of the state in service provision or the economy of the state is only fundamental in avoiding market failures. Classical economic theory consequently supposes restricted government intervention, and is against regulation by the state at a large scale. The emphasis by neo-liberal has been on reducing the role of the state and broadening fiscal deregulation.

Public choice theory critiques the welfare state and the style of public management and administration based on it. Batley & Larbi (2004:34) have pointed out that the main criticism of public choice theory against the traditional public administration is that the reward systems do not promote effective performance. Public choice belief is that bureaucracies are monopolistic, unresponsive, expensive unresponsive and inefficient (O'Flynn, 2007:355). The absence of market forces and market competition, promotes self-serving, corrupt and dishonest and opportunistic conduct by bureaucrats, and politicians. The promotion of growth and expansion of government bureaucratic functions leads to a complex over expansion of the state and complex extensions of bureaucracy which over time become difficult to control hence leading to bureaucratic failures (Batley & Larbi, 2004:34).

The principal-agent theory explores organisational relations as a strain between the "principles" and "agent" in the public sector and the problems that arise when there is a divergence of their interests. This theory pre-supposes that economic self-interests govern the actions of different players. Questions arise then on how principals can manage the self-interest of agents who have been mandated to act on their behalf (Batley & Larbi, 2004:35). Challenges including conflict of interest; information sharing by agents and how best the principals can control and hold agents accountable are noted as inherent in the classical bureaucratic form of administration. The principle-agent theory motivated a focus on clarifying the relationships between service providers

and policy-makers and improves control and accountability of the agents to the principals (Batley & Larbi, 2004:36).

Transactions cost economics theory transactional costs as a key determinant of the most efficient organisational arrangement for service provision that is either through contractual relationships between different companies or through internal organisational hierarchy of a bureaucracy or firm (Williamson, 1999; Batley & Larbi, 2004). The theory was significant as it set out alternatives for governments based on costs of services.

The property rights or rights theory provides a framework for understanding performance related incentives in private ownership and whether such incentives can be introduced in the public sector for efficient service delivery. This theory notes that managers and employees in the public sector are the same as in the private sector and can be motivated to perform through incentives that take place through organisational reforms that mimic the property rights of the private sector. These would allow for the alignment of incentives for managers with the performance of the organisation (Batley & Larbi, 2004:38).

New institutionalism can also be noted as an important theoretical framework that shaped public service reforms. It explores how individual interests within an organisational set up can be aligned to shared organisational goals, and the structuring of an organisation constituting of different individuals with self-interests (Batley & Larbi, 2004:35).

In addition to the theoretical streams discussed above, it is also important to look at organisational research and how it has also influenced reforms in the public sector. Worth noting is that, there has been transference of private sector management style to the public sector, based on the basis that private sector management style promotes professionalism and improved organisational performance (Hood, 1991:93-109; Rhodes 1996:652-667).



The social network theory has been influential in redirecting the focus of public service provision from not only the state but to a broader network of different actors and agencies that are not public. These different actors may include private companies and organisations, non-governmental organisations (NGOs) and other public organisations. This view has been specifically influential in the “New Governance” paradigm (Salamon, 2002:9) that will be discussed later on in this chapter.

Generally, organisational research focuses on the promotion of managerial improvement initiatives through decentralisation to emphasise managerial autonomy and professionalism. It has included reform based on disaggregating, downsizing and emphasising organisational and individual performance management (Batley & Larbi 2004: 46).

In terms of the role of the public sector, the recent consensus has been that the public sector does have a role to play, although that role might have to be adapted slightly. Osborne & Gaebler (1992) summarised the new role as “reinventing government” by stating the key shifts in governments’ role and responsibilities in service delivery. In essence, the suggestion in “reinventing government” is that the role of government shifts significantly from the traditionally direct service provider, to that of ensuring that things are done through different mechanisms and arrangements with other players (Batley & Larbi, 2004:44). The key responsibility of government becomes more of “facilitating” service delivery, a responsibility that is completely separated from the actual performance of the service (Savas, 1982:84).

A considerable body of literature also details the new functioning of the public sector and the public sector reform programmes that they form part of.

### 2.4.1 New Public Management (NPM)

NPM presents a broader framework of management approaches that challenges the traditional public administration approach. This new management approach was first introduced to the public sector by Hood in a seminal paper in 1991 (Hood, 1991). NPM became a popular public service provision framework during the 80's, when it took over the public administration reform agenda of Organisation for Economic Co-operation and Development (OECD) countries. NPM refers to a set of management ideas and practices borrowed from the private sector that seek to increase efficiency, accountability and effectiveness (Batley & Larbi, 2004:40).

NPM is therefore, a school of thought that seeks to address the inadequacies popularly attributed to classic public service management. Another area of concern in NPM is to ensure that public sector organisations provide decision-makers with sound advice on all aspects of policy, conceptualization, review, implementation, monitoring and evaluation (Peters, 2001:32).

A summary of the core concepts on NPM is provided by Hood (1991) through the identification of seven key principles of NPM as presented in the table 1.1.

**Table 1.1: Seven principles of NPM**

<b>Doctrine</b>	<b>Meaning</b>	<b>Typical Justification</b>
'Hands-on professional management' in the public sector	Active, visible. discretionary control of organisations from named persons at the top, 'free to manage'	Accountability requires clear assignment of responsibility for action not diffusion of power
Explicit standards and measures of performance	Definition of goals. targets, indicators of success, preferably expressed in quantitative terms, especially for professional services	Accountability requires clear statement of goals efficiency requires 'hard look' at objectives

Greater emphasis on output controls	Resource allocation and rewards linked to measured performance; breakup of centralised bureaucracy-wide personnel management	Need to stress results rather than procedures
Shift to greater competition in the public sector	Move to term contracts and public tendering procedures	Rivalry as the key to lower costs and better standards
Stress on private sector styles of management practice	Move away from military-style 'public service ethic', greater flexibility in hiring and rewards; greater use of PR techniques	Need to use 'proven' private sector management tools in the public sector
Stress on greater discipline and parsimony in resource use	Cutting direct costs, raising labor discipline, resisting union demands, limiting 'compliance costs' to business	Need to check resource demands of public sector and 'do more with less'
Shift to disaggregation of units in the public sector	Break up of formerly 'monolithic' units. Unbundling of U-form management systems into corporatized units around products, operating on decentralized 'online' budgets and dealing with one another on an 'arms-length' basis	Need to create 'manageable' units. separate provision and production interests, gain efficiency advantages of use of contract or franchise arrangements inside as well as outside the public sector

*Source: Adopted from Hoods, 1991:4-5*

One key argument of NPM is that the managerial techniques that work in the private sector should work in the public sector if employees in the public sector are to be considered to be the same as those in the private sector (Peters 2001:31). The dismantling of public sector bureaucracies and the ending of the command and control structure of public sector management is founded on the values borrowed from similar restructuring of private sector entities. The perceived need for public sector is to rationalize and downsize in order to be efficient (Kaul, 1998b:1).

Though the different tenets of NPM were adopted extensively in developed and developing countries in different contexts, a number of restrictions limited the success of these reforms. Rhodes (1996) identifies some flaws of NPM that include NPM's constricted intra-organisational focus, which ignore the intricate network of actors concerned with public sector service delivery. Another weakness is NPM's "fixation" with objectives, whilst disregarding key facets of governance not tied to main objectives (such as maintaining network relationships). A final weakness of NPM is the intrinsic divergence between steering and competition (Rhodes, 1996:102).

#### **2.4.2 New Governance**

New Governance is a more recent development in the public administration and management. This view is a response to the blurring between the public and private sector responsibilities which required some ways not dependent on the sanctions of government (Stoker, 2006:42). Central to New Governance approach is a shift "...in the unit of analysis in policy analysis and public administration from the public agency or the individual public program to the distinctive tools through which public purposes are pursued" (Salamon, 2002:9). New governance approach is essential in analysing the distinctive tools used in public programmes.

Further, New Governance is focused more on the process and means of addressing public problems through organisational networks rather than hierarchical agencies. A range of public sector tools are comprehensively defined by Salamon (2002:12). These tools extend across different government programmes and departments, and provide a consistent foundation for regulating the relations of complex networks of actors and government (Jooste, 2008:11). New Governance also provides a clearer understanding of the various network arrangements and how the tools structure networks, define the actors centrally involved in particular programmes and the roles the actors assume (Salamon, 2002:13). The emphasis and shift from programmes run by government to collective action through networks, New Governance also underscores the need for a new approach to public management (Salamon, 2002:15).

Another important principle of New Governance is the emphasis on the negotiation and persuasion as the operational approach in public management rather than the traditional public management approach of command and control. Given this background New Governance proposes a set of skills on the part of public managers broadly termed enablement skills, which are defined as "...the skills required to engage partners arrayed horizontally in networks, to bring multiple stakeholders together for a common end in a situation of interdependence" (Salamon, 2002:16).

Tools for public management defined under New Governance have four key dimensions; *coercion* measures "the extent to which a tool restricts individual or group behavior"; *directness* measures "the extent to which the entity authorizing, financing or inaugurating a public activity is involved in carrying it out"; *automaticity* measures "the extent to which a tool utilizes an existing administrative structure to produce its effect;" and *visibility* measures "the extent to which the resources devoted to a tool show up in the normal government budgeting and policy review process" (Salamon, 2002:25-35). These dimensions are linked to broad aims in the public sector reform: effectiveness, efficiency, equity, manageability and legitimacy.

### **2.4.3 Public Value**

Given the weaknesses and challenges noted with NPM, attention shifted on what was termed the Public Value approach which is founded deeply on the work of Moore (1995). Public Value indicates and represents a move away from the ideological principles of market versus government provision (O'Flynn, 2007:357). This shift represents a growing recognition and acknowledgement that "...the social values intrinsic in public service provision may not be sufficiently attended to by the economic efficiency calculus of markets' (Hefetz & Warner, 2004:174). This may also highlight or signal a new pragmatism where the traditional ideological debates are largely disappearing (Hughes, 2006:11). The fundamental principle of public value is a shift

from the prime focus on outcome and efficiency toward the accomplishment of the wider governmental purpose of public value creation.

Public Value has been portrayed as a "...multi-dimensional construct; as a reflection of collectively expressed; politically mediated preferences consumed by the citizenry; created not just through 'outcomes' but also through processes which may generate trust or fairness" (O'Flynn, 2005:89). Public Value has been defined as the value produced by government through the provision of public services and other actions (Kelly, Mulgan, and Muers, 2002:4). Public Value is also described as "...a summation of individual preferences of the users or producers of public services . . . is collectively built through deliberation involving elected and appointed government officials and key stakeholders" (Stoker, 2006:42). Public Value approach, therefore, offers a constructive way of reflecting about the goals and performance of public policy. The approach can be viewed as a yardstick for assessing performance, decisions made on resource allocation and the appropriate delivery system (O'Flynn, 2007:358).

Public value provides a wider measure than is traditionally used in the new public management, covering results, the means of delivery used as well as trust and legitimacy. In a democratic state, public value is determined by public preferences; defined by the public and articulated through various ways and means (O'Flynn, 2007:359). Moore (1995) argues that the creation of public value is the central responsibility of public managers. The legitimacy of government is therefore dependent on how effectively it creates public value (Kelly *et al.*, 2002:4).

#### **2.4.4 Networks**

The involvement of multiple actors (interorganisational collaboration) in service provision has also been described as "governance" (Rhodes, 1996:214). A network by definition "...is the pattern of linkages traced between organisational actors who are in some way interdependent. It is also a socially construed vehicle for purposive action"

(O'Toole, 1997:45-52). O'Toole (1997:45-52) further argues that implementation networks can also be used as important instruments for mobilising the energies and efforts of different individual actors to deal with the problem at hand. According to O'Toole (2008:617), collaborative networks are:

“are collections of government agencies, non-profits, and for-profits that work together to provide a public good, service, or "value" when (a) a single public agency is unable to create the good or service on its own and (b) the private sector is unable or unwilling to provide the goods or services at all or in the desired quantities”.

Key factors that bring together different players into a network are the need for them to solve a common problem and also a share mutual dependence on the other. Different organisations or players therefore are unable to achieve their own objectives without reliance on the resources or capacities possessed by other actors other than themselves (Scharpf, Reissert, and Schabel, 1978; Benson, 1982; Rhodes, 1996).

Public funds have been noted as driving factor behind collaborative efforts, however, positive results can be attained through voluntary cooperation and tolerance by the interested parties. Networks therefore are a set of organisations working together for a public good or to provide a public service (O'Toole, 2008:617)

Though collaborative networks have the advantages of bringing different parties together for collective effort and maximum use of resources, it has been noted that networks in general are complex, not easy to manage, have accountability challenges and concerted effort has to be steered for the different parties to share the same perceptions, build trust, create synergies and achieve the same solutions to a problem (O'Toole, 2008; Rhodes, 1996).

Milward & Provan (2002:24) describe the use of third parties (contracting out) to deliver social service and their acting on behalf of the state as “the hollow state”. In essence, the ‘hollow state’ can be referred to as “...any production situation where a governmental agency relies on others (firms, non-profits or other government agencies) to jointly deliver public services”. The problems and services that government is

mandated to provide to the general populace have become complex and therefore there is need for coordination, cooperation and collaboration and as a result of this need, networks provide the alternative arrangement to provide an array of service that also includes the provision of water services.

Given the theoretical background provided above, there are different approaches that have been adopted by different governments in service delivery that conform to the tenets of new public management, new governance as well as public value management.

## **2.5 Approaches to service provision**

The main objective of the public sector is to facilitate the access and delivery of services for the general citizenry. Public sector management is to larger extent a feature of its customs and correlated socio-economic and socio-political factors. Trends in the management of public services have seen different countries emphasising and adopting different aspects and approaches in public service provision (Kaul, 1998a:14). Common public management trends founded on ideological streams discussed in the sections above include:

- devolution of service delivery activities to local government levels and other actors including public private partnerships;
- management focused more on attaining outcomes, in terms of equity, efficiency, quality and effectiveness of services, and less on conformity with rules;
- increased focus on the service needs of the consumers for instance, access, information provision on procedures, standards for service quality times and more considerate services and
- collective action with lower levels of government or the private sector rather than government doing it alone (Kaul, 1998a:15).



It is important to note that the public sector is not for provision of all services. Where appropriate, alternatives have to be sought, while at the same time ensuring that mechanisms are identified and fostered for service delivery. With the growth in democracy around the world, participation has become an important dimension of public service.

### **2.5.1 *Decentralisation of service delivery***

Decentralisation generally implies the transfer of powers from central government to lower levels in a political-administrative and territorial hierarchy (Crook & Manor 1998, Agrawal & Ribot 1999). There are three broad forms of decentralisation. Firstly, *deconcentration*, which means key responsibilities of central government are undertaken through regional or local authorities without the central government transferring any power to the institutions (Ekpo, 2007:4). *Delegation* is when central government transfers decision making and service delivery responsibilities to independent organisations (NGOs, private sector) or local government. These organisations are however, directly accountable to central government for the specific functions delegated to them. The last form of decentralisation is *devolution*, which involves the transference of political authority to local government for service delivery, resourcing and decision-making (Ekpo, 2007:4).

Types of decentralisation include, *political decentralisation*, which is can be understood as the transference of power of selecting political leadership and representatives from central governments to local governments. *Administrative decentralisation* is the transfer of responsibility for the planning, financing and management of certain public functions from the central government to local governments. *Fiscal decentralisation* constitutes the public finance dimension to decentralisation in general. It deals with how public expenditure is organised between and across different levels of government in the national polity (UNDP Primer, 2007:2). The expectation is that through decentralisation, the responsiveness and efficiency of the public sector is improved. The economic and political reasoning behind decentralisation is that through the transfer of power to lower

tiers of government, citizens assume more influence over the type of services they utilize and are better positioned to hold public officials accountable directly (Ekpo, 2007:3).

The decentralisation of responsibilities and resources to lower tiers of government, presents a means for encouraging local governments to match funds to local preferences and to service demand.(Kaul, 1998a:29). “Decentralisation holds a number of benefits for improving the policy-making environment, which could include the proliferation of policy actors inside and outside government and the resources they bring along” (Kaul, 1998a:29).

### **2.5.2 Privatisation**

Privatisation is perceived to broadly imply a sale (transfer) of state-owned enterprises to the private sector. According to Ramanadham (1991), “...privatisation in a broad sense refers to the application of the principle of marketisation, or the bringing of enterprises under the discipline of the market”. It entails a complete shift towards private ownership of public assets or the transfer of public sector assets to the private sector (Ramanadham, 1991; Savas, 1982).

Privatisation is comprised of two main components which include divestiture as well as corporatisation. Divestiture may be in the form of liquidation, full or partial divestiture. Corporatisation may also be partial or complete commercialisation of the public asset (Adejumobi, 1999:92). The privatisation of public sector assets or utilities has been adopted in some cases where the costs of services have become high and unaffordable for the public sector to deliver them or as a result of the need to improve quality of public services.

### **2.5.3 Private-Public Partnerships (PPPs)**

PPPs have become an important means of delivering public services in many countries (Nzimakwe, 2006:48). As such, the growing interest in the subject has precipitated the growth of academic literature on conceptualising the concept, its impact on economic growth and service delivery and the varied experiences across countries. According to Houghton, (2011:77), "...PPPs have risen to the forefront of development processes as the global shift towards governance has gathered momentum". Thus, PPPs in numerous guises are now a commonly accepted mechanism of urban service provision. Literature on PPPs have pointed out that these partnerships come about through the recognition that many contemporary problems cannot be solved using traditional mechanisms of government (Houghton, 2011; Rogerson, 2009; Jamali & Yamount, 2007).

There are various PPP management techniques or ways, and these include contracting, franchising/concession, affermage, leasing, management contract, build own and operate, build operate and transfer, management buyout and cooperatives. According to Sohail *et al.* (2003:45) "...there is no strict PPPs classification that can be made, because partnership classification depends on the type of services, the nature and strengths of the partners and the objectives of the PPPs". The overall aim of a PPP is to meet public needs, which would not have been realized without joint efforts. Through PPPs, the public sector will be able to maintain partial ownership and management of services avoid accusations of "whole sale" transfer of service delivery to the private sector and at the same time be effective in its role of political accountability to its constituents (Sohail *et al.*, 2003:46).

In theory, it is observed that partnerships promote benefits arising from economies of scale, economies of scope and the sharing of resources, commitment and enthusiasm (Rogerson, 2009:103).

As PPPs have developed over the years the perceived advantages have become more obvious and the reasons for adopting this approach have gone beyond relieving the public sector's financial burden. Walker, Mulcahy, Smith, Lam & Cochrane (1995) suggested three main reasons for using the PPP approach, these include:

- The fact that the private sector has more mobility than the public sector. For instance, the bureaucracy and the burden of administration can be avoided and the private players can be able to save the costs of planning, design, construction and operation.
- The private sector can provide better service to the public sector and establish a good public private partnership so that a balanced risk-return structure can be maintained.
- The public player can mobilise large sums of funds for the large-scale infrastructure projects compare to government's capacity to do the same. Rogerson (2009: 96) argues that PPPs have the advantage that sees the harnessing of power of different sectors to provide the opportunity for service delivery. This line of argumentation has thus provide reason and purpose for most governments to undertake and include the private sector in service delivery (Walker *et al.*, 1995:121).

An analysis of international experiences shows many instances where PPPs have failed to achieve the expected outcomes. Critics of PPPs argue that the main reason for failure of PPPs is as a result of the adoption of a PPP model that does not conform to the institutional and regulatory environment and setting in the country (Venkatachalam, 2007:25). The efficiency of market oriented solutions to public sector challenges has been debated extensively and concerns have been raised on the benefits that could be accrued from transforming public sector management to private sector structure and the overall effects on poverty reduction (Venkatachalam, 2007:25). Despite the concerns raised regarding the appropriateness of PPPs in the management as well as production of water in urban setting, the potential of PPP to transform and innovate water services provision is acknowledged in literature (Koppenjan & Enserink, 2009; Bovaid, 2004; Domberger & Fernandez, 1999).

PPP arrangements do not entail a complete ownership of a public utility by the private entity, rather a portion of the operational functions are awarded to the private company whilst the local government or central government retains ownership and some functions in service provision. "In PPP arrangements, decentralised innovative systems operate with private entities as an alternative for supplying water to the urban locations" (Ruet, 2006:312).

In theory, partnerships have been noted to have collaborative advantages in that they provide economies of scale and scope as well as opportunities for mutual learning in the provision of services. Economies of scope are provided in partnership arrangements in the ability of different parties to exploit complementary capabilities and competencies (Bovaird, 2004: 201).

#### **2.5.4 *Alternative Service Delivery (ASD)***

Alternative Service Delivery is defined differently by different people. The term was coined in the Canada public sector and has gained popularity in public management circles as well as literature (Ford & Zussman, 1997; Good & Carin, 2003; Peteri, 1997). Ford & Zussman (1997: 6) define 'Alternative Service Delivery' as:

"...a creative and dynamic process of public sector restructuring that improves the delivery of services to clients by sharing governance functions with individuals, community groups and other government entities".

ASD broadly entails the adoption of new and apposite management and organisational arrangements to improve the delivery of services. Partnerships with different levels of government as well as external parties to the government are means through which improvements are made in the public sector (Good & Carin, 2003:4).

Alternative Service Delivery has two main components:

- Establishment of relevant organisational structures within government which are independent of the traditional government structure as means through which improvements in services can be made as well as improvements in organisational performance; and
- Linking different organisations (inter government, between sectors) through networks and partnerships as a way of providing flawless, responsive and citizen oriented services (Good & Carin, 2003:5).

It is important to note that ASD is not one-dimensional. It encompasses features inherently found in re-organisation, decentralisation as well as privatisation. “It is not just about deficit reduction, devolution, and central agency controls. It involves rethinking roles and functions of government organisations. It depends heavily for success on a strong public policy foundation, a tradition of sound public administration, and on a citizen-centered focus for public services” (Good & Carin, 2003:5).

It is important to note that the key characteristics of Alternative Service Delivery mechanisms are also shared by some public private partnerships. Notably, Alternative Service Delivery entails the pursuit of new and appropriate organisational forms and arrangements, including partnerships with other levels of government and nongovernmental sectors, in order to improve the delivery of programmes and services. One can argue that alternative service delivery mechanism is an encompassing and broad concept that includes some public private partnership arrangements.

## **2.6 Key determinants of successful PPPs**

There are various elements that have been noted in literature as key determinants of successful PPPs. Table 2.1 provides an overview of key success elements for PPPs as well as assurances needed for successful PPPs.

**Table 2.1: Key determinants of successful PPPs**

Key Determinant	Key Considerations
Political and social commitment	<p>Government regarded as a credible partner in PPPs?</p> <p>Is there strong political commitment to the PPP approach?</p> <p>Will a PPP solution be socially and politically acceptable?</p>
Local and National government policy	<p>Does the policy environment favor PPPs and does it cater for the different components required for a PPP?</p> <p>Is PPP consistent with other government policies i.e. land use, social policies etc.?</p>
Legal Framework	<p>Is there a sufficiently stable and comprehensive legal framework for enabling the use of PPPs?</p> <p>Is there sufficient legislation and transparency to support the management and supervisory role of the public sector in a PPP?</p>
Market structure	<p>Are private service providers sufficiently autonomous?</p> <p>Are efficient private sector operators available and are they competent, sufficiently capitalised and interested in PPP?</p> <p>Are private sector operators willing and able to scale up the service provision?</p>
Cost recovery	<p>Is there adequate cost recovery through users achieved under the PPPs?</p> <p>Are alternative sources (government budget, NGO) available for covering costs not recovered from users?</p>
Taxation, reporting and accounting framework	<p>How are PPPs treated in corporate accounting?</p> <p>How are PPPs treated in national authority accounts?</p> <p>How are public disclosure requirements defined?</p> <p>What is the tax status of a PPP?</p>

	Are there any particular advantages (tax breaks, depreciation mechanisms, subsidies, etc.) to stimulate the development of PPPs?
Financing issues	Is access to capital markets easy for the private sector? Does a national capital market exist, or is international funding needed? Can private sector financing compete with public financing? What financial support mechanisms by government are available
Technical and organisational issues	Is there sufficient data available about existing service provision (quality, quantity, users, etc)? Is there sufficient data available about assets currently in use? Can competitive tendering be assured? What quality control mechanisms exist? Is the government capable of monitoring and assuring quality control?
Trust	Do private sector operators trust the partnering government? Does the government trust the partnering private sector operator? Does the general public trust private sector providers, or is there a strong “anti privatisation” sentiment?
Stakeholders	Are stakeholders sufficiently consulted and included in the design of the PPP?

*Source: Adopted from European Commission, 2005:12*

## 2.7 Summary

The discussion under this chapter focused on the key theoretical frameworks that have provided a basis for some of the public service reforms and the different approaches that were undertaken in most developed and transitional countries. NPM, New



Governance, Networks and Public Value provide key principles that have shaped public reforms. As noted in this chapter, public sector reforms have seen the adoption of private sector style of management. Emphasis has been on performance, restructuring of government entities through various means to ensure efficient use of resource and effective management for improved service delivery. Decentralisation and a reduction of the role of government in Africa have been noted in the public reforms through structural adjustment programmes. These reforms have basically followed the main tenets of New Public Management, Network Governance and New Governance and Public Value.

A common thread of thought running through the theoretical streams discussed in this chapter and recent schools of thought is that though large state bureaucracies are not desirable in service delivery, the public sector has an essential facilitation role to play in ensuring that public sector service delivery objectives are attained and ensuring efficient service delivery. Given the importance of the state agencies, what becomes fundamental is that there is no longer business as usual, rather the role of the state transforms in a way that ensures efficiency, responsiveness and effectiveness. The means through which services are delivered are transformed in order for the desired quality of services to be delivered. This is thus achieved through alternative service delivery mechanisms that include PPPs. The success of these partnerships are however dependent on a number of factors that include, political and social willingness; financial arrangements; enabling legal and regulatory frameworks; trust building; stakeholder involvement as well as the agreed costs recovery framework.

Of particular interest to this study, are the reforms and the public private sector arrangements for urban water provision. The following chapter provides an analysis of country experiences in as far as public water provision reforms and private sector participation through PPPs are concerned. Of importance are the lessons that can be noted regarding the key determinants of successful partnership arrangements as well as causal factors of unsuccessful partnerships. Key outcomes of each case study will be noted for future learning.

## CHAPTER 3

### **Application of Private Sector Participation in Urban Water Provision: Some Country Experiences**

#### **3.1 Introduction**

In this chapter, case studies on water sector reforms from Kenya, South Africa, Senegal and Tanzania are analysed. The case studies provide useful learning and practical examples of the engagement of private sector in water services delivery. Institutional reforms as well as legislative reforms undertaken in the water sector are analysed as key enabling factors for private sector participation in water service delivery. Lessons from the outcomes of the PPPs provide learning opportunities for future PPP arrangements.

#### **3.2 Overview of urban water provision arrangements in Africa**

Urban water utilities within different African countries have different dimensions of organisational background and operational environment. There are however, two common challenges related to their management shared across countries. Firstly, the inefficiencies of water utility companies have been identified as a major cause of poor access to water services (Bayliss, 2002:5). Cost recovery in most utilities is a mammoth task given that a third of the water produced is lost through infrastructural leakages. Whilst revenues derived from services are insufficient to cover operational costs and expansion of water infrastructure (Kayaga, 2008:147). For most water utilities, the reduction of losses or non-revenue water remains a challenge. Given the rapid increase of population within urban setting, the reduction of non-revenue water, therefore, becomes a key strategic area of focus in relation to improving service provision and meeting service demand (Bayliss, 2002:5). The second challenge facing

water utilities in Africa is the management style that is not market or commercial oriented. This has consequently led to limited ability of the water utilities to expand water services infrastructure (Johnstone, Wood, & Hearne, 1999:3).

Generally, there is widespread domination of the government in the provision of public services in Africa and this domination has been generally blamed for the challenges and poor state of public services (Kayaga, 2008:147). Literature has noted that the monopolistic nature of government provision of services had led to absence of competition in service provision therefore resulting in ineffectiveness, and regulatory pricing instruments to ascertain demand and reveal service expenses (Mergos, 2005; Kayaga, 2008; Saleth & Dinar, 2000). Consequently the subsidised and “below-cost prices” have led to governments’ inability to investment in the expansion of water facilities (Mergos, 2005: 60).

Given the challenges discussed above, governments have focused on institutional reforms as a way of encouraging water utilities to be customer focused, accountable, transparent, efficient and commercially oriented. The reform process has resulted in notable improvements and a paradigm shift by water utilities from crisis management to strategic commercial management and performance management and planning (Bayliss, 2002:6).

According to Marin (2009:1), many governments in the 1990s embarked on ambitious reforms of their urban water supply and sanitation services that often included delegating the management of utilities to private operators under various contractual arrangements. The participation of the private sector in the provision of water services is founded on the principles of NPM regarding the adoption of private sector style of management and on the premise that the participation of the private sector is a panacea for poorly performing public sector. Since 1990, more than 260 contracts have been awarded to private operators for the management of urban water and sanitation utilities in the developing world (Marin, 2009:1).

A study done by Marin (2009) focused on analysing the performance data from more than 65 large water PPP projects that have been in place for at least five years (three years in the case of management contracts). During the period 1991 to 2000, "...the number of developing countries with active water PPP projects increased from 4 to 38" (Marin, 2009:2). Out of the more than 260 contracts awarded since 1990, 84 per cent were still active at the end of 2007, and only 9 per cent had been terminated early (Marin, 2009:1-2).

PPP projects in the provision of water services have been marred with controversy regarding their performance and benefits that can be accrued through their involvement in public service. This controversy arose as a result of the number of contracts terminated under PPP arrangements (Farlam, 2005:4). However, various studies (Marin, 2009; Kayaga, 2008; Kauffmann and Perard, 2007; Bayliss, 2002; Mergos, 2005) suggest that the general performance of water PPP arrangements have been widely satisfactory. A number of PPP arrangements achieved good results on coverage (access), quality of service, and effectiveness, whilst other PPPs brought about considerable improvements to the populations they served despite being terminated early. Worth noting is that out of 65 countries that on water PPPs during the period 1980 to 2000, 41 countries had private water operators and 84 per cent of awarded contracts were active by the end of 2007 (Marin, 2009:6). By 2007, 24 water utilities previously under PPP arrangements had reverted to public management whilst some contracts were terminated early as a result of disagreements between the parties (Marin, 2009:6). It is important to note that these numbers are not irrational bearing in mind that what has been in practice was a market test of an extensive assortment of contractual designs in different operational environments. What is critical are the determinants of successful PPP arrangements that include, enabling institutional arrangements; political and social willingness; the choice of contractual arrangements as well as the willingness by the public and private partners to make it work during implementation.

### 3.3 Typology of water provision arrangements

It can be noted that private sector participation through PPPs have mainly constituted the alternative service delivery mechanisms for most governments in as far as water provision is concerned. These mechanisms or arrangements have comprised of a relationship, supported by a contract, in which the private sector is committed to undertaking specific responsibilities of financing, management, ownership, cost recovery; committing investment funds as well as bearing the commercial risk associated with PPP arrangements (Mergos, 2005:60). The contractual arrangements vary from service contracts, management contracts, leases, operations and maintenance concessions, capital investments to divesture and asset ownership. These contractual designs are means through which different levels of partnership are formed to improve accountability, efficiency, responsiveness, effectiveness, adequacy as well as quality of public service provision. These partnerships can be with local (small scale) and international private entities or NGOs.

It is important to note that partnerships between government and the private sector in the area of water and sanitation have been adopted for local governments as both an alternative financing mechanism and a way to improve the productivity, quality and cost effectiveness of services through changing the incentives operating in service delivery (Johnstone *et al.*, 1999:3). The scope of private sector involvement in water and sanitation ranges from the delivery of services, maintenance of installations, meter reading, collection of service payments and data processing. The participation of the private sector in service delivery, although not necessarily ownership of assets, has been widely adopted in developed countries and advocated by donors in developing countries as part of economic reform.

There are many different options for the participation of the private sector. These can be classified as follows:

- *Service contracts* – mainly short term arrangements for the provision of specific, short-term, time bound and limited services. These services include meter

reading, repair of water leaks, computing and maintaining assets (Johnstone *et al.*, 1999:3). Service contracts have been in existence for a number of years, however, there has been a shift towards more comprehensive types of service contract in recent years.

- *Management contracts* – under this contract the private sector assumes the responsibility of day to day operation and maintenance. The contract would be for a given period of time and with agreed outcomes and investment by the private sector is not usually required under a management contracts. The commercial risk in this regard is not borne by the private company (Johnstone *et al.*, 1999:3). The local government maintains financial responsibility and planning for the expansion of the infrastructure. Payment of the private company may be fixed as only paid once fees are collected from consumers.
- *Leases* - allow a private company to rent out water facilities services from the national or local authority for a fixed period of time. The public authority maintains overall ownership and duty for financing the system and expansion. The private company is however, responsible for financing working capital and assumes commercial risk in the daily operations of the utility (Jamali & Yamount, 2007:613). Though the private company is not directly responsible for capital costs, rental fees are based on the costs of debt service for capital costs. The contractor has a motivation to capitalise on fee collection since its returns equal revenue generated less operating costs and rental fees (Johnstone *et al.*, 1999:3).
- *Build own operate and transfer contracts* – these contracts allow a private company to finance, build and operate a new infrastructure facility according to performance standards set by the national or local authority. These mechanisms are mostly used for capital investment and physical infrastructure which generate substantial revenue through user fees such as a wastewater or potable water

treatment plant. (Peteri, 1997; Johnstone *et al.*, 1999). The contract periods under this arrangement are often for long period to allow for recuperation of capital investment. A demand for the services would need to be guaranteed by the national or local authority. The private company bears the risk if this demand is not met (Johnstone *et al.*, 1999:3).

- *Concessions* – (also known as *affermage*) are contracts which are long-term in nature and require investment by the private company in the water utility. Under concession contracts the private company (concessionaire) assumes overall responsibility for the water utility system, which includes maintenance, expansion, operations, management and investment. The private company collects revenue directly from consumers and bears the risk of cost recovery (Peteri, 1997:11). The private company may also be penalized for not meeting set targets and standards.
- *Divestiture* – this type of arrangement allows for shared responsibility between the national or local authority and the private company. “Generally, a corporate agreement will stipulate private and public responsibilities, including representation on the board of directors and division of profits. Private finance may be facilitated by the establishment of a separate credit rating with support from the public authority” (Johnstone *et al.*, 1999:3). Less often, the private company may be the service provider whilst the government would serve as a regulator.

Comparatively, concessions are the most adopted form of PPPs in terms of both number and size of investment. Table 3.1 gives an overview of the different types of private sector participation and key responsibilities assumed under each arrangement.

**Table 3.1: Allocation of key responsibilities under the various options for private sector participation**

<b>Option</b>	<b>Asset Ownership</b>	<b>Operations and Maintenance</b>	<b>Capital Investment</b>	<b>Commercial Risk</b>	<b>Duration</b>
<b>Service Contract</b>	Public	Public and Private	Public	Public	1-2 years
<b>Management Contract</b>	Public	Private	Public	Public	3-5 years
<b>Lease</b>	Public	Private	Public	Shared	8-15 years
<b>Concession</b>	Public	Private	Private	Private	25-30 years
<b>Build Operate Own Contracts (BOO)</b>	Private and public	Private	Private	Private	20-30 years
<b>Divesture</b>	Private or private and public	Private	Private	Private	Indefinite (may be limited by license)

*Source: Adopted from World Bank, 1997:23*

Various governments in Africa have thus adopted an assortment of options such as the ones indicated in Table 3.1 for the delivery of water in both urban and rural areas. According to a recent study by Farlam (2005:7), in cases where partnerships have been able to best deliver desired outcomes, "...thorough planning, good communication, strong commitment from parties and effective monitoring, regulation and enforcement by the government" were present. Where there has been a lack of thorough planning, PPPs in the water sector have not had much of the desired results in Africa. Table 3.2 highlights the types of partnerships adopted in different African countries for the provision of water.



**Table 3.2: PPPs in Africa from 1989**

Country	City	Type of PPP (term)	Partner	Date
Burkina Faso	All urban	Management Contract (5 years)	Veolia1 / Mazars & Guerard	2001
Cameroon	All urban	Concession (10 years)	Office National D l'Eau Potable (Morocco)	2007
Cape Verde	All Urban	Concession (50 years )	Aguas de Portugal	1999
Congo	Brazzaville	Management Contract (20 years)	GETRAB/SCT	2002
Cote D'Ivoire	All Urban	Concession (20 years)	Saur	1960 renegotiated 1989
Gabon	Libreville	Concession (20 years)	Veolia	1997
Ghana	All Urban	Management Contract (5 years)	Vitens/Rand	2005
Guinea	Conakry & 16 smaller cities	Lease Contract (10 years )	Saur/CGE	1989
Kenya	Malindi	Management Contract (5 years)	Gauff	1999
Madagascar	All urban	Management Contract (2 years)	Lahmeyer	2005
Mali	Bamako & 16 urban centres	Concession (20 years)	Saur	2000
Morocco	Rabat-Sale and TangerTaitouan	Concession (25 years)	Veolia	2001
Mozambique	Maputo, Motolia & 3 other towns	Lease contact	Saur/Aguas de Portugal	1999

Mozambique	4 small cities	Affermage (5 years)	Aguas de Portugal	2001
Rwanda	All Urban	Management Contract (5 years )	Lahmeyer	2003
Senegal	All urban	Concession (10 years)	Saur	1996 renewed 2006
South Africa	Johannesburg	Management Contract (5 years)	Ondeo	2001
South Africa	Nelspruit	Concession (30 years)	Biwater	1992
South Africa	Stutterheim	Lease Contract (10 years)	Ondeo/Suez	1993
South Africa	Dolphin Coast	Concession (30 years)	Saur	1999
South Africa	Queenstown	Lease Contract (10 years )	Ondeo/Suez	1992
Tanzania	Dar Es Salam	Lease Contract (10 years)	Biwater	2003
Uganda	Kampala	Management Contracts (3 years and then 2 years )	Gauff then Ondeo	1998 then 2002
Zambia	Copper Belt	Management Contract (4 years)	Saur	2001

*Source: Adopted from Bayliss, 2002:4*

The following section gives an overview of four case studies of different contractual agreements entered into for the provision of water in urban areas. The countries provided here is Kenya, where a management contract was entered into for the provision of water in Malindi in 1999. South Africa offers a case study of a concession in the Dolphin Coast town in 1999. In 2003, Tanzania entered into a lease agreement for the provision of water for Dar Es Salaam, while an affermage was signed for all urban areas in Senegal in 1996 (Dill, 2010:611-624).

## 3.4 Case studies

### 3.4.1 *Senegal*

The World Bank estimated that the percentage of Senegal's urban population with access to a safe supply of piped water was 54 per cent in 1995. Another 42 per cent had access only to public fountains, and the remaining 4 per cent obtained water from traditional sources or from vendors. Only 20 per cent of the urban population was connected to a waterborne sewerage system (World Bank, 1995:10). Hence the need for reform of the country's institutional and legislative framework to improve the provision of services. The government of Senegal, like many other African countries recognised the constraints regarding the management of the country's water utility and regulatory framework and hence noted the need for managerial autonomy to enhance the efficiency of operations, effectiveness of water services. The need for the creation of a conducive regulatory and institutional framework for private investment and increased efficiency of water services became of fundamental importance (Economic Commission for Africa, 2005:5).

It is important to note that prior to the attainment of independence, the urban water services in Senegal were in the hands of a private entity (Companie Générale des Eaux du Sénégal) through a concession contract (Brocklehurst & Janssens, 2004:2) The company was nationalised in 1971 when the shareholders were required to sell their shares to the State. This saw the subsequent creation of the Société Nationale d'Exploitation des Eaux du Sénégal (SONEES) (Economic Commission for Africa, 2005:5).

In the 1970s and 1980s, the water utility was plagued with problems which resulted from a lack of autonomy from government, chronic water shortages in the capital city, and piecemeal development of the assets (Brocklehurst & Janssens, 2004:2). In 1994 "...SONEES supplied 94 million cubic meters to urban centers – about 257,000 cubic

meters per day. The volume supplied in Dakar was only 128,000 cubic meters per day, while the demand was for some 210,000 cubic meters. As a result there was a deficit which translated to 16 hours of service per day on average. Water losses from leakage and illegal connections were estimated at 27 per cent of production in Dakar” (World Bank, 1995:34).

In 1994, the Government had created a steering committee of key ministers in the government responsible for water services provision. After deliberations at a workshop in 1994, the committee agreed to setting up of a state asset holding company which would retain assets and the extraction of water rights (Brocklehurst & Janssens, 2004:2). The creation of an operating company was also recommended whose key responsibilities were to produce and distribute water. The committee also agreed that a professional operator would own 51 per cent of capital with the other 49 per cent being owned by a mixture of Senegalese investors, former workers of SONEES and the State (Brocklehurst & Janssens, 2004: 2). Other recommendations made by the committee included the restructuring of tariffs as a way of ensuring cost recovery and sustainability of water provision within urban areas. The functions of the state asset holding company were also drawn by the committee.

The committee members placed great emphasis on learning from the experiences of other transactions and reform processes. They had commissioned a series of case studies, conducted by a Dutch consulting firm, which compared three countries in the region where the private sector had been brought in through similar contractual arrangements: Guinea, The Gambia, and Cote d'Ivoire. Fact-finding missions, including members of the government and donors as well as the consultants themselves, had been carried out in April and May of 1994 (Brocklehurst & Janssens, 2004:3).

Lessons learnt from the experiences of three other African countries highlighted challenges rising as a result of conflicting interests of operating and asset-holding companies (Economic Commission for Africa, 2005:6).

Recommendations made after the fact finding missions proposed the establishment of a State Asset Holding Company to assume the responsibility of ownership that the fixed assets. Whilst ownership of moveable assets and other equipment be assumed by the private entity. Lessons from other fact finding missions highlighted the need for a high degree of transparency and clarity regarding asset categorisation in order to reduce confusion and conflict (Brocklehurst & Janssens, 2004:4).

According to Brocklehurst & Janssens (2004:5), one of the major objectives of the institutional reform of the urban water sector was to establish long-term financial viability through increased efficiency and effectiveness.

The financial policy of the sector was defined on the following basis:

- The only support to come from the State would be in the form of on-lending of donor's financing; there would be no on-going operating subsidies.
- There would be no excessive increases in water tariffs; increases would be introduced gradually, set initially at a constant rate but adjusted upwards or downwards according to progress in reaching financial equilibrium.
- The social tariff (the subsidised first block of the tariff for consumption under 10-cubic meters per month) would be retained in order to ensure affordability (Economic Commission for Africa, 2005:6).

A 10-year affermage contract governing operations of the system was signed between three parties: the Republic of Senegal, represented by the Ministère de l'Hydraulique, SONEES, and a private operating company formed especially for this purpose, Sénégalaise des Eaux (SDE). SDE also signed a performance contract with SONEES for the same duration. The contract outlined SONEES' responsibilities with respect to making infrastructure available to the operator and prompt execution of work relating to system investment (Economic Commission for Africa, 2005:6).

Related to adjustments to tariffs in accordance with the Contract Plan, SDE's main obligations included:

- using the productive capacity of the infrastructure in an optimal manner;
- maintaining and repairing infrastructure at its own cost;
- renewing a minimum of 14,000 meters and 6,000 connections per year; and
- meeting World Health Organization (WHO) standards for water quality (Boccanfusod, Estache, & Savard, 2006: 4).

The public-private partnership adopted in Senegal has been noted as one example of a successful participation of the private sector in water provision. Notable outcomes include:

- Increase in the volume of water produced in the urban sector- Since the reform process began, the volume of water produced for use in the urban water sector has risen each year, from 96.3 million cubic meters in 1997, to 114.6 cubic meters in 2002, a 19 per cent increase. Approximately 74 per cent of this water is used in Dakar (Economic Commission for Africa, 2005; Boccanfusod *et al.*, 2006).
- Improved financial health- The Government agreed to implement, through time-bound action plans, corrective measures to reduce the high water usage of public sector clients, budget annual public agency consumption, and pay government water bills within two months of issuance. Looking at the cash flow can also assess the financial health of the sector. The cash balance of SONEES has been positive since 1996, when major sector investment started, as predicted by the financial model (Economic Commission for Africa, 2005:6).
- Changes in tariffs- Senegal uses an "increasing block tariff" structure, comprising a subsidized "social tariff" for levels of consumption below 20-cubic meters in a 60-day period, a regular tariff for consumption over this, and a "dissuasive tariff" for consumption above 100-cubic meters per 60 days. The tariff consists of the rate of charges for operation and maintenance of the system and a component

to cover costs of SONEES (Brocklehurst & Janssens, 2004; Economic Commission for Africa, 2005; Boccanfusod *et al.*, 2006).

#### **3.4.1.1 Key Lessons**

- The choice of an affermage contract, which was enhanced by the addition of strong financial incentives to reduce leakage and improve billing and collection efficiency, was innovative. It addressed the needs of the Government and kept the assets in their hands, and operations and maintenance functions were clearly defined (Brocklehurst & Janssens, 2004:18).
- Furthermore, the nature of the contract fostered a partnership between the Government and the private operator.
- Strong political will and good leadership from the relevant ministry was present throughout the reform process and there was little interference from the part of the Government.
- It was a well-designed process that allowed for flexibility and innovation when necessary.

#### **3.4.2 Kenya**

Prior to the advent of reforms, water and sanitation services were the responsibility of local authorities and the National Water Conservation and Pipeline Corporation (NWPC), a state corporation established under the State Corporations Act (Akech, 2007:13). The NWPC was established in 1988 to manage government operated water supply systems. At the same time, the government established a Ministry of Water, whose mandate was the development and management of water systems. This system did not; however, guarantee universal access to water and sanitation services, and a significant size of the population accessed water services from small scale community groups. "By 2000, less than half the rural population had access to potable water and, in

urban areas, only two thirds of the population had access to potable and reliable water supplies” (Owuor & Foekon, 2009:18).

The primary legislative instruments governing water provision and sanitation in Kenya were the Water Act (48 of 2002) (Government of Kenya) and the Local Government Act (49 of 1998) (Government of Kenya) and they established a detailed institutional framework for the delivery of these services (Akech, 2007:14).

The poor performance of the water and sanitation sector in Kenya was attributed to institutional deficiencies (Akech, 2007; Owuor & Foekon, 2009). Particularly, “...it was felt that the heavy control that the central government exercised over local authorities interfered with the efficient running of water and sewerage departments...made it difficult for water service providers to make independent, timely and appropriate decisions in response to local service needs” (Akech, 2007:14).

In efforts to enhance the responsiveness, efficiency, accessibility and sustainability of public water services, the government promulgated a new policy – the National Policy on Water Resources Management and Development of 2002 (Akech, 2007:5). This policy sought to comprehensively address the challenges facing the water and sanitation sector. The National Policy on Water (Government of Kenya, 2002a) recognised the challenges constraining the growth of the water sector as including: the lack of funds for expansion, maintenance and operation of water system and management of water existing water resources; the centralisation of decision-making; disintegration of management duties; absence of appropriate regulation and co-ordination of different players in the sector and absence of inter-linkages with other water related sectors (Akech, 2007:6).

Regarding the participation of the private sector in water services provision, the Water Policy (Government of Kenya, 2002a) had a specific objective on private sector financing and self-financing. This paved the way for participation of the private sector, civil society and communities in the management and development of water resources



(Owuor & Foekon, 2009:18). Private sector involvement would be largely in the form of PPPs. The companies would bring in management expertise, technical skills and credit standing to finance investments. Another key policy document is the National Water Resources Management Strategy 2006-2008 (NWRMS) (Government of Kenya, 2006), which was formulated by the Minister for Water and Irrigation in line with the requirements of the Water Act ( Act 48 of 2002). The NWRMS established some guiding principles, which included, decentralisation of water provision decision making and responsibilities, established cost recovery parameters, the separation of policy and regulatory functions from service provision and establish water supply and sewerage management and development linkages (Akech, 2007:20).

In particular, the NWRMS sought to improve the participation of the private sector in water services provision through; the creation of a transparent and autonomous regulatory institution; promoting competition and the participation of local private sector (Akech, 2007:20).

After the passage of the Water Act (Act 48 of 2002) (GovZim, 2002b), water services provision was gradually decentralised to 117 water service providers. These are linked to 8 regional water services boards across Kenya (Akech, 2007:20). However, the overall management of water systems remained under the National Water Conservation and Pipeline Corporation in Kenya. The National Water Conservation Pipeline Corporation is a state owned utility set up in 1989 to develop, manage and operate water supply services (Akech, 2007:20).

The Kenyan government sought to put to trial private sector participation (PSP) in the functions, management and maintenance of water supplies before embarking on widespread adoption of PPPs in water service provision. In May 1995, the Malindi area was selected to pilot the engagement of the private sector through a PPP contract (Njiru, 2000:340). Malindi was selected given that there were no constraints related to water supply facilities hence diverse management and organisational development arrangements could be put to test. A service contract was awarded to a German

engineering company without undergoing the competitive tender processes (Njiru, 2000:341). The objectives of the PPP included:

- improve efficiency in billing and revenue collection through metering and meter reading and hence reduce commercial losses;
- reduce physical water losses by zonal bulk metering;
- improve customer services;
- improve overall operational efficiency of the water supply system and
- reduce the cost of maintenance of the water system (Njiru, 2000:341).

The contract awarded to a German engineering company was a management contract. Under the terms of the contract, the company was expected to make use of the existing staff from the National Water Conservation Pipeline Corporation in the management of the Malindi water facilities and services. Initially the contract was for eight months. However, after the eight months of the contract the general objectives of the contract had not been achieved (Akech, 2007:24). A number of constraints were noted that included lack of trained and motivated staff to carry out financial management and customer relations functions as well as lack of trained and honest meter readers (Njiru, 2000:20). In order to address these constraints, the contract was extended and further extensions were done on an ad hoc basis for a total of 3.5 years (Njiru, 2000; Akech, 2007).

Njiru (2000:341) noted some improvements in water services provision in Malindi and these included;

- The percentage of billing basing on functional meters and monthly readings increased from 21 per cent at the commencement to 89 per cent at the end of the initial period with estimated readings dropping overall from 66 per cent to 13 per cent.
- There was an increase in revenue collection from 50 per cent to 62 per cent of what was actually billed.

- There was a reduction of physical losses from an estimated figure of 44 per cent to 41 per cent. This was achieved through a computerised leak detection system as well as a repair programme.
- The number of connections increased by 62 per cent from 4,000 to 6,500.
- Malindi staff trained in financial management, operations and facility maintenance.

#### **3.4.2.1 Key lessons**

The following lessons can be noted from the management contract in Kenya;

- A self-financed contract based on win-win situation between the client and contractor is more likely to be successful than an externally financed contract as this is unlikely to be sustainable in the long-term.
- Selection of appropriate contract type (whether service and management) is critical to the success of PPP.
- The government should transfer sufficient management responsibility to the private operator in order to reap potential benefits of private sector management.
- Rights and responsibilities of parties involved in the management contract was clearly spelled out which reduce the chances of disputes and conflicts.
- The existence of a regulatory and institutional framework that accommodates and defines private sector participation in water services provision is key in determining the success of any PPP contract.
- The Water Act (Act 48 of 2002) (Government of Kenya, 2002b) provided for the establishment of a regulator. The National Water Conservation Pipeline Corporation which assumed an important role of regulating private sector activities in the water sector.
- The piloting of the management contract (with a limited timeframe) in Malindi allowed for redesign, renegotiation and adjustment of terms of contract to ensure the parties involved are in agreement.

### **3.4.3 Tanzania**

Tanzania gained independence from the British in 1961, and by 1967 had formally adopted state socialism (Boyd, 2001:201). The nationalisation of the country's utilities, including water, farming, exports and banks was embarked on under socialism. However, in 1986, Tanzania abandoned socialism, and signed a Structural Adjustment Programme (SAP) with the IMF, which led to the end of free water and the prescription that Tanzania's water utilities should be self-sustaining (WaterAid, 2003:6). Economic and public sector reforms were embarked on to dismantle the state-controlled economy and develop a market-oriented economy. This phase also witnessed the introduction of user fees, co-financing and cost sharing for public amenities such as education, water and health care (WaterAid, 2003:6).

One of the first moves made after the 1986 signing of Structural Adjustment Programmes was the establishment of the Parastatal Reform Programme. The objectives of establishing this entity was to reduce the domination of parastatals in the economy, promoting private sector participation in public service provision and the mobilization of local investments (Boyd, 2001:201). A special body called the Presidential Parastatal Sector Reform Commission (PPSRC) was created to handle the divestiture process and to oversee a massive programme to privatise, lease or wind up the state-owned enterprises (Boyd, 2001:203).

The institutional changes embarked on were in line with the guidelines of the PPSRC and were the establishment of autonomous public bodies called Urban Water Supply and Sewer Authorities (UWSAs). These bodies were expected to function on a self-financing basis in each of Tanzania's 18 urban centers. The conversion of water utilities into authorities was aimed at strengthening the financial management, billing and collection capacities of these utilities (WaterAid, 2003:7). Though the UWSAs were independent of government and self-financing, these UWSAs would receive government funds through the Ministry of Water. By the end of 1997, all the UWSAs

experienced considerable losses and were not capable of meeting their recurrent expenditure costs (WaterAid, 2003:7).

Given the challenges faced in the provision of water services, what was obvious was the need for an integrated approach to water resources management. It was against this background that the National Water Policy of 1991 was revised through a prolonged consultation process, which ended with Cabinet approval of the new National Water Policy (NAWAPO) in July 2002 (WaterAid, 2003:7). The NAWAPO is believed to have rectified all the previous policy shortfalls and introduced decentralisation of water supply management (WaterAid, 2003; Boyd, 2001).

It is important to note that the reforms of the water sector in Tanzania formed part of an overall and comprehensive economic and public sector reform programme, which was an initiative of the government and supported by the IMF and the World Bank (Boyd, 2001:13). The engagement of private sector entities in the provision of water services was considered as a viable option given the poor state of water utilities in the country. “The cash-strapped, severely indebted government realised that its biggest need was investment. They looked to private sector participation as a way of attracting foreign companies to invest in and rehabilitate the utilities, particularly Dar Es Salaam Water Supply Authority (DAWASA)” (WaterAid, 2003:9).

In August 1997, international water and sewage operators were invited for a pre-qualification to tender for a PSP arrangement in DAWASA. Four bids were received by December 1997 of which “... one was a joint venture; the second one was a bid for a 30-year concession agreement; whilst the third one offered a package that included a joint venture, a concession agreement, delegated management and technical assistance and the final one offered no specific form of arrangement” (WaterAid, 2003:7). The PPSRC technical committee opted for a joint venture followed by a concession. This choice of contacts revealed the government’s concern – which was to solicit the much needed investment that could be provided by an international private entity (WaterAid, 2003; Boyd, 2001:10). The challenge regarding this was that the

government had insufficient funds to offer as equity in a joint venture. The African Development Bank, which was a co-financer, preferred a management contract as the top option given DAWASA's poor management and the state of water infrastructure. Investment in DAWASA was considered risky; hence a management contract would be a viable arrangement that could allow the utility to be put in order before a substantial investment was made into it (Boyd, 2001:13). A lease arrangement was favored by the World Bank on the basis that that this arrangement would allow the private entity to undertake transformation of the management system of the water. These differences were resolved by the end of the 1998, and the three parties agreed that the best option was an "operating lease contract" (WaterAid, 2003:14).

Biwater was selected as the potential contractor in December 2002, after the first round of applications and withdrawal of some companies (Boyd, 2001:17). The terms of the arrangement stated that the selected contractor would establish and register a Private Operating Company in Tanzania, with the contracted company having majority ownership and twenty per cent of shares available for purchase by local investors. A ten year lease contract was proposed under the arrangement (PPSRC, 2000).

Requirements for investment to extend and rehabilitate the water system were not covered under the lease contract (Davies, 1997:135). Construction activities for the water system were provided in a separate and different development contract which was made between the Ministry of Finance and DAWASA. The development contract covered vital issues of increasing coverage and connections as well as extending the water system (Boyd, 2001; WaterAid, 2003).

Tariff increases were not put into consideration by the government. The increase in revenue was expected to be derived from the reduction in the amount of non-revenue water, rehabilitation of existing connections as well as the establishment of new connections (Boyd, 2001:18).

In order to improve billing of water, Biwater established a consumer database and new computerised billing system. The matching of consumer reference numbers with connections for water at household level was a difficult task as most households had illegal water connections (WaterAid, 2003:15). DAWASA subsequently refused to accept the incomplete database. The slow process of introducing the new software may have partly explained Biwater's poor financial performance (WaterAid, 2003:15).

Under the contract, Biwater was expected to purchase 170,000 water meters, however, in the first year Biwater imported 19 270 meters and only installed 2 458 meters (Boyd, 2001: 18). In the first year a total of 16,500 water meters was supposed to be installed, however, only 15 per cent had been installed and at the same time the target of 1000 new water connections had not been achieved in the same year (Boyd, 2001:18).

In the first year of the contract, there was a decrease in the income derived from water consumption by 37 per cent. For instance, during the period, January to March 2004, revenue collections were a third of bills issued, half the proportion DAWASA claimed to have achieved in 2003 (Boyd, 2001:19).

Biwater and DAWASA understood the lease agreement in different ways. The contract was a complex and voluminous document. DAWASA took the contract as a project implementation blueprint, while Biwater apparently saw it as a starting point for further negotiations on certain key issues (WaterAid, 2003:15).

A technical audit undertaken for the period August 2003 to June 2004 highlighted many instances where Biwater was failing to comply and achieve the targets set out in the contract. The measurement of Biwater's overall performance in water services delivery could not be done through the audit given that targets could not be enforced until achievable standards were agreed with DAWASA.

### **3.4.3.1 Key lessons**

There are a number of lessons that can be drawn from the failed PPP in Tanzania. Notably;

- The lease contract placed a significant level of (commercial) risk on the operator, Biwater. The tariff structure and remuneration formula in place meant that Biwater faced considerable revenue risk as their revenues were wholly reliant on cash collections. Given the poor level of revenue collection and the lack of data on its customer base, this degree of risk transfer simply proved too high for the operator to bear.
- Lack of adequate information was one of the major difficulties encountered in the preparation and in the implementation of the lease contract in Dar Es Salaam in Tanzania.
- There is no regulator in place in Dar Es Salaam; this indicates a high regulatory risk. The fact that the privatisation process was concluded and the PPP became operational before the regulatory framework was in place further strengthens the perception that the process was rushed.
- The bidding process leading to the lease contract was prolonged and complex, mainly because it proved difficult to attract a private investor willing to bear the risk by taking a stake in Dar Es Salaam water system. This indicated the high degree of doubt over DAWASA's financial status, customer base and revenue generation potential.
- The polarisation of opinion around the issue of privatising public utilities and the frequent failure of loan-funded PSP projects in urban water supply added to the complexity.

### **3.4.4 South Africa**

The legislative and policy framework in South Africa serves as a point of departure in understanding the participation of the private sector in water services in South Africa.



Water has been a concern of government in South Africa long before the democratic reforms ushered in after the 1994 general elections. Notable examples of regulatory frameworks that have been repealed and replaced includes, the Vaal River Development Scheme Amendment Act (Act 21 of 1948); the Hartebeestpoort Irrigation Scheme Act (Act 22 of 1948) and the Water Act (Act 54 of 1956) (Kayaga, 2008; Moeti & Khalo, 2008).

The Water Services Act (108 of 1997) (South Africa, 1997) is the first Act of Parliament after the apartheid period that provides the universal right to access to basic water supply and basic sanitation required in terms of the Constitution (RSA, 1996) (previously referred to as Act 108 of 1996) (Muller, 2003:1117). This Act is broad in scope, and corroborates the role of the National government as the custodian of the water resources in the country (South Africa, 1997). The roles of local municipalities in the direct provision of water services are also provided in the Act. “The Act further provides for national and provincial monitoring, oversight and intervention in municipal water services delivery; and calls upon all spheres of government to work together in the spirit of intergovernmental co-operative government to ensure clean, safe, and affordable water for all” (Sohail & Cavill, 2009; South Africa, 1996; South Africa, 1997).

In as far as the options of public or private provision of basic water supply and sanitation, the Water Services Act (South Africa, 1997), provides a clear regulatory framework for the operations of institutions responsible for water services provision. The procedures and standards for setting tariffs are also prescribed in the Act. The Act emphasises the obligation of municipalities in ensuring that the populations within their jurisdiction have access to affordable, quality, efficient, economical and sustainable water services (section 11(1) (South Africa,1997).

The National Water Act (Act 36 of 1998) (South Africa, 1998) provides a broader framework for water policy compared to the Water Services Act (South Africa, 1997; Moeti & Khalo, 2008:221). Water policy areas covered under the National Water Act

(South Africa, 1998) include water user pricing, water resource management and protection, water provision for the general, the creation of institutions to implement international agreements and integrated management of water (Moeti & Khalo, 2008:221).

South Africa established a comprehensive regulatory framework for the participation of the public sector in the provision of public services. “In April 1997 the South African cabinet approved the establishment of an Inter-Departmental Task Team, chaired by the Department of Finance, to initiate the development of a regulatory framework for PPPs, and explore how PPPs could improve infrastructure and service delivery efficiency” (Plummer, 2000:7). The task force was given the responsibility of developing a national PPP programme. The main objectives of the task included the identification of the main constraints to successful implementation of PPPs, the development of a policy that was applicable across sector and intergovernmental and legislative and regulatory reform (Plummer, 2000:7). By the end of 1999, the cabinet had sanctioned the adoption of a strategic framework for the implementation of PPPs. In 2000, the Treasury Regulations for governing the implementation of PPPs were published in line with the terms of the Public Finance Management Act of 1999 ( Act 29 of 1999) (South Africa, 1999). This was also followed by the publishing of the Treasury Manual on Public Private Partnerships in 2001. The Treasury Regulations provided the standardisation of the processes and steps to be undertaken by any government department prior to authorisation by the treasury to enter into a PPP agreement (Plummer, 2000:8).

A notable example for the engagement of the private sector in water provision is the Dolphin Coast 30 year water concession signed in 1999. The Borough of Dolphin Coast (BoDC) signed the PPP concession contract with Siza Water Company (Siza), controlled by French multinational SAUR Services (Farlam, 2005; Kotze, Furguson & Leighland, 2011; Sohail & Cavill, 2009). The terms of the contract indicated that Siza Water Company would have the right to “...possess, use, operate, manage, maintain, rehabilitate, redesign, remove, improve and expand the existing works at its own risk and cost” (Sohail & Cavill, 2009:263). Siza Water Company was also expected to

achieve the set levels of water services founded on affordability, the company would also bear the commercial risk associated with the expansion and maintenance of water infrastructure as well as take responsibility for billing the customers, revenue collection as well as provision of services. The BoDC, made a considerable investment in infrastructure in the Dolphin Coast area shortly before Siza took over responsibility for the system (Sohail & Cavill, 2009:263).

Siza Water Company was also expected to purchase water from Umgeni Water and distribute it to retail consumers in the Dolphin Coast area. Umgeni is a state owned business enterprise involved in water management and is the largest bulk water supplier in the province of KwaZulu-Natal. Siza assumed the responsibility for the provision of water and sanitation services to the Dolphin Coast since 1 April 1999 (Sohail & Cavill, 2009; Kotze *et al.*, 2011).

The BoDC Municipality choice of contract as well as the engagement of the private sector for water provision was an alternative option given the state of water services in the Municipality. According to Kotze *et al.*, (2011:632), "...projections in developmental growth (both in terms of high income and low income residents), combined with the very poor state of existing bulk infrastructure, presented the BoDC with a growing investment and management responsibility that it felt could best be met through seeking an alternative model". The municipality was short of money to upgrade and expand the services. They also lacked the experience to provide a comprehensive water service.

Sohail & Cavill (2009:264) noted that in 2001, Siza failed to pay its concession fees to the BoDC as a result of a 20 per cent increase in the cost of water charged by Umgeni Water. The end result was the contract adjustment by the municipality including the halving of the annual concession fee which was supposed to be paid to the municipality until 2006, reducing the investment commitments from the concessionaire to R10 million for the first five year period, and increasing prices for consumers (Sohail & Cavill, 2009:264).

Noted outcomes include:

- On track delivery of approved commitments.
- The quality of the service improved with regards to water loss, unaccounted water (or water loss) dropped from over 30 per cent to 16 per cent in a period of one year.
- Tariff collection rate increased from 75 per cent to 97 per cent.
- Three customer service centers became operational with established payment procedures and a full-time community liaison officer for disadvantaged areas.
- There was an increase in costs under private provision which led residents to seek out alternative means, including using river water in the rainy season to lessen their costs, which is not beneficial to the user or the operator (Sohair & Cavill, 2009:265). In the first year after Siza took over, there were 140 cases of cholera in the area as a result of people drawing unhygienic water from streams rather than paying for treated water. The poor people in the area were not cushioned from the impact of tariff increases.

This case study illustrates the challenges of water concessions at the municipal level as these have longer timeframes.

#### **3.4.4.1 Key lessons**

The following are key lessons that can be drawn from the water concession in Kenya.

- The choice of private sector arrangements has a greater influence on the costs of water. For concessions, water tariffs are likely to be higher given the need by the contracted company to recover investment costs within the stipulated timeframes.
- It is essential to put in place a gradual tariff increase system to cushion consumers from high tariffs for long periods to avoid scenarios where the consumers seek alternative and unsafe water sources.

- Strong regulatory and policy frameworks that inform private sector participation is important in regulating the process and reducing likelihood of conflict between the Municipality and contractor.

### **3.5 Summary**

The different country experiences discussed in this chapter provide key lessons regarding the involvement of private sector in water services as well as key determinants for successful PPPs. The different types of PPP arrangements were discussed and what is clear is the complexity of PPPs. These partnerships often require and demand a strong and clear regulatory and policy framework; time; participation of key stakeholders in formulation processes for them to flourish. The consideration of key success determinants such as political and social willingness, the right regulatory conditions have been noted to have contributed to PPP success cases such as in Senegal and Kenya.

Key lessons emerging from Kenya, are the need for government to undertake thorough feasibility trials or studies that can inform the feasibility and success factors for private sector engagement. Feasibility studies address issues to do with affordability of service and risks associated with PPPs before long term partnerships can be considered.

From the case studies of Senegal, Kenya and South Africa it was noted that PPPs are a feasible option that could be used for improved water service delivery. A strong and clear regulatory and institutional framework is important in informing and guiding private sector engagement. A strong regulatory framework can also be taken as government's guarantee needed to attract and provide a conducive environment for private sector participation.

Tanzania provided an interesting contrast of how PPP arrangements could fail if processes of engagement as well as terms of contract are not clear. The absence of a

regulatory body in Tanzania also meant that there was no regulation and enforcement of the terms of contract.

An analysis of the regulatory and institutional framework for water provision in Zimbabwe is provided in the next chapter. The analysis of the regulatory and institutional framework provides a starting point in assessing the water service delivery conditions in the country and challenges.

## **CHAPTER 4**

### **Legal and institutional framework for water provision in Zimbabwe**

#### **4.1 Introduction**

An analysis of the institutional and regulatory framework for water provision is presented in this chapter. The first part of the chapter assesses the reforms that have been undertaken regarding the management and administration of water in Zimbabwe through the enactment of key legislative instruments such as the Water Act (GovZim, 1998a) and the Zimbabwe National Water Authority Act (Act 11 of 1998) (GovZim, 1998b). This assessment is done in consideration of the key objectives of the reforms as well as outcomes of the reforms. An analysis of urban water development and challenges is also carried out in this chapter.

#### **4.2 Water sector institutional reform: some international perspectives**

Institutional arrangements governing the water sector in many countries in general and African countries in particular, have undergone significant transformation in the past four decades (Saleth & Dinar, 2000:1). The nature and direction of these institutional transformations are varied and country specific with economic, political, and resource contexts different from the other. However, with the integration of world economic system through globalisation, countries have realised the need to make institutional changes to improve service provision and also learn from each other's experience as an essential way for improving their performance in water management (Saleth & Dinar, 2000:1).

Institutional reforms undertaken in many countries globally were undertaken against a background of major constraints in water services delivery. These challenges are related to low water charges (often government subsidised), meager cost recovery rates and poor financial investment in infrastructural development (Mergos, 2005:60). The decline in water sector investment as well as the deterioration of water infrastructure has prompted questions regarding the effects on the sustainability of water services. These questions on efficiency and sustainability of water services have thus, motivated reforms in water cost recovery, management, administration and pricing policies in many countries.

Common water sector challenges noted in literature (Bayliss, 2002; Mergos 2005) include:

- a gradual increase in water scarcity;
- deterioration of water quality;
- conflicts related to water allocation between sectors and regions;
- low cost recovery rates and poor operational performance;
- monopolistic control and involvement of government in provision of water services; and
- outdated policies and institutional arrangements.

In addition to the aforementioned factors, forces of population growth, globalisation, urbanisation and the realisation that water is not a finite resource make the need for effective use and management of water imperative through institutional policy reform (Mergos, 2005:60).

Though the reforms of water sectors vary between countries in relation to coverage and effectiveness, "... the kind of water institutional changes currently observed at the international level are remarkable for their commonality of focus and direction..." (Saleth & Dinar, 2000:2). The common elements found in water sector reforms across countries include:



- reorientation of water service provision to allocation efficiency;
- shift from centralised water administration and management towards privatisation and decentralisation;
- focus on the integrated water resource management; and
- emphasis on sustainable physical infrastructural development and economic viability of water provision.

### **4.3 Background to water reforms in Zimbabwe**

The crisis in the water sector in Zimbabwe since the 1980s, made noticeable the inherent challenges and deficiencies existing in the country's water institutions to effectively address the problems in water provision, that are not only linked to resource expansion but to the allocation and management of the same resources. Zimbabwe, like other countries in Africa in general and in Sub-Saharan Africa responded to domestic as well as international circumstances and made remarkable changes to improve the effectiveness of water management through decentralization of water management. It put into place a complex water reform process which included regulatory, institutional and economic changes.

One key driver of the reforms that took place in the water sector in particular, was the public sector restructuring exercise which the government was undertaking under the Economic Structural Adjustment Programme (ESAP). During the 1980s Zimbabwe developed large budgetary deficits and rising unemployment rates resulted in the adoption of "the Brentton Woods" led Structural Adjustment Programme (Plummer & Nhemachena, 2001: 6). The key reforms focused on the liberalisation and de-regulation of markets and macro-economic stabilisation – supposedly with the aim of improving direct foreign investment and the balance of payment through reducing government expenditure (Zhou, 2001:239). The water sector reform process was undertaken against this background and as a way of addressing key weaknesses inherent in the colonial water management legislation. The aims of the water sector reforms included:

- promotion of equal access to water for all;
- stakeholder involvement in the decision-making processes at all levels;
- adoption of integrated land and water resources planning and management;
- improvement of the accessibility and availability of water of appropriate quality and quantity;
- project water resources' critical role in poverty alleviation;
- introduce strategies that advance production of precise data on the demand and usage of water (underground and surface);
- promotion of the development of strategies for private sector investment in the water sector;
- introduce water pricing guidelines and instruments which distinguish water as an economic good; and
- support integration of sector and regional water policies (Makurira & Mugumo, 2009, Mtisi, 2011, Manzungu, 2005).

Though the reforms resulted in institutional and regulatory changes, a concerted effort was also focused on development of workable solutions to environmental degradation problems and increasing levels of poverty.

#### **4.4 Policy framework for water and sanitation in Zimbabwe**

It is important to note that there is no single document that broadly provides a policy framework for the management of the water resources and provision of water and sanitation services in Zimbabwe. The water and sanitation sector witnessed significant transformation in the 1990s with notable regulatory frameworks such as The Water Act (Chapter 20:24, 31 of 1998) (GovZim, 1998a) being adopted to ensure a more equitable allocation of water and a stakeholder participation in the management of water resources. A significant change that was brought about through the Act was in the ownership of water. After the passage of the Water Act (GovZim, 1998a) water was no

longer privately owned. The prior system of water rights was replaced by water permits of limited duration which are allocated by Catchment Councils. Water was to be treated as an economic good and the principle of “user pays” was to apply. Pollution of water became an offence under the new Act which adopted the principle of “polluter pays” (Mtisi & Nicol, 2003; GovZim, 1998a).

Institutional changes came into effect with the enactment of the Zimbabwe National Water Authority Act of 1998 (Chapter 20:25, 11 of 1998) (GovZim, 1998b) which led to the establishment of ZINWA, a parastatal agency with a mandate for bulk water supply as well as engaging in water planning. ZINWA was mandated with responsibilities that included management of water resources on a catchment level; management and awarding of water permits; water pricing; maintenance and operation of water infrastructure, and implementing water development projects.

The framework for the establishment of institutions such as the National Environmental Council, the Environmental Management Agency, the Standards and Enforcement Committee and the Environmental Management Board is provided through the Environmental Management Act ( Act 13 of 2002) (GovZim, 2002). Through the Act, the Government is mandated to command public and private development institutions to embark on an Environmental Impact Assessment (EIA) before carrying out any activity and activities to protect the environment as suggested in the EIA.

#### **4.4.1 *The Water Act of 1976 (Act 41 of 1976)***

Prior to the adoption of the Water Act (Act 31 of 1998) (GovZim, 1998a) the main Act regulating water usage and management was the Water Act of 1976 ( Act 41 of 1976) (Government of Rhodesia, 1976). In general, the Water Act of 1976 was “...a piece of legislation that brought any form of water use under control and aimed at the systematic allocation of water among users” (Makurira & Mugumo, 2009:168). The Water Act (Act 41 of 1976) (Government of Rhodesia, 1976) gave general entitlement to access to water provided the water was for primary use, which is human basis use. Usage of

water beyond this for purposes of deriving a profit or benefit was deemed as commercial use and hence required a water right. The Water Court based in Harare was given the authorisation through the Act, to issue water rights.

The Water Act of 1976 (Act 41 of 1976) (Government of Rhodesia, 1976) had several weaknesses that were noted, hence, amendments that were provided through the Water Act (Act 31 of 1998) (GovZim, 1998a). The following weaknesses were noted:

- The issuing of water rights was centralised at one place in Harare which prolonged the procedure as no other government agency was mandated to issue water rights. In situations of water shortage, the procedure of reallocation of water rights was long and complex given that the process was centralised.
- Through the Water Act (Act 41 of 1976) (Government of Rhodesia, 1976) there was perpetual issuing of water rights on a first-come-first-served basis. This resulted in water resources being fully allocated, with no allowance for additional water rights to be issued, in spite of the need.
- The Act did not provide for the revision of a water right even in circumstances where the water right holder was not exercising his or her water rights. Revision of any water rights was only undertaken in circumstance where the holder forfeited their rights (Government of Rhodesia, 1976).
- There was no requirement for payment for water service provision or possession of water after it was granted.
- Environmental management and water quality issues were not articulated in the Water Act (Government of Rhodesia, 1976).
- The Act (Act 41 of 1976) did not provide a framework for the utilization of groundwater supplies. Though the drilling of deep water boreholes could be authorized by the Secretary of Water, there was limited control of volumes of water drawn from underground (Mtisi & Nicol, 2003; Latham, 2002; Mtisi, 2011; Government of Rhodesia, 1976).

The Water Act (Act 41 of 1976) (Government of Rhodesia, 1976) was amended a number of times, and these amendments were in line with global trends that tilted

towards integrated resource water management and the reduction of the direct involvement of the state in water resource management. The 1976 Water Act was repealed and this resulted in the Water Act (Act 31 of 1998) (GovZim, 1998a).

#### **4.4.2 The Water Act of 1998 (Act 31 of 1998)**

The Water Act (Act 31 of 1998) (GovZim, 1998a) was signed into law after substantial dialogue with different stakeholders. Underlying and fundamental principles of this Act consist of equity, economic efficiency and environmental management. The following key changes were put into place through the Act:

- Water use permits replaced water rights. Each water permit issued had a time limitation and renewal of the permit was depended on the availability of water and evidence of efficient use.
- The issuing of water permits was decentralised to seven catchment councils.
- Water was now owned by the State instead of private ownership.
- Emphasis was placed on the management of water on hydrological boundary basis. Groundwater was also to be viewed as part of the hydrological system.
- Stakeholder representation and involvement in the management of water resources became key with stakeholders participating in water allocation and decision-making processes.
- Environmental management considerations were also embedded in the Act to ensure sustainable use of water resources.
- Emphasis was made on the consideration of water as an economic right.
- More control on pollution levels was initiated through the introduction of the “polluter pays” principle.
- The decentralisation of water management to Catchment Councils and Sub-Catchment Councils which are managed by different stakeholders (GovZim, 1998a).

The Water Act (Act 31 of 1998) (GovZim, 1998a) set precedence for the creation of Catchment Councils and Sub-Catchment Councils as important bodies, established through the Act as institutions for the management of water issues at the lowest level of government administration.

The setting up of the Zimbabwe National Water Authority was established by section 3 of the Zimbabwe National Water Authority Act (Act 11 of 1998) (GovZim, 1998b). The Act sets out the key responsibility of the Water Authority, which generally is to advise the Minister of Water Development in the development of national policies and standards (water) pertaining to:

- resource planning, management and development;
- quality and pollution control and environmental protection;
- hydrology and hydrogeology;
- dam safety and borehole drilling; and
- pricing (GovZim, 1998b)

#### **4.5 Institutional arrangements for water services in Zimbabwe**

Water and sanitation institutions in Zimbabwe are structured by law and policy in line with their responsibilities for service delivery. The institutional framework for water is mainly comprised of the Zimbabwe National Water Authority, Catchments Councils and Sub-Catchment Councils. Though these institutions have undeniable positions with respect to water management in Zimbabwe there are additional institutions, parastatal agencies, and NGOs that participate in the management of water in general (Gumbo, 2006:4). The key roles and responsibilities of the various institutions for water service provision are outlined in Table 4.1 below.

**Table 4.1: Key responsibilities of water institutions in Zimbabwe**

<b>Institution</b>	<b>Key roles and responsibilities</b>
Ministry of Agriculture: Mechanisation and Irrigation Development	Overall development and implementation of the government's policy on agriculture and irrigation.
Department of Research and Extension Services	A functional arm under the Ministry of Agriculture Mechanisation and Irrigation Development which provides extension services to irrigators, soil surveys and irrigation development.
Agricultural and Rural Development Authority	Quasi-government agency responsible for the operation of government-owned irrigated estates and farms.
Department of Irrigation.	As specialist department under the Ministry of Agriculture and Rural Development responsible for irrigation planning, identification of schemes, designing, construction, operation and management of existing and new schemes.
The Ministry of Water Resource Development and Management	Custodian of water rights and develops policies on water development.
Department of Water Development	A specialist department under the Ministry of Water Resource Development and Management with the main task of formulation of national policies and standards for planning, management and development of the nation's water resources.
Zimbabwe National Water Authority	Water planning quasi-government agency advising Catchment Councils and Sub catchment Councils. A key role in the management of the water permit system and the operationalisation of water pricing systems, planning, coordination, management of water resources and the delivery of water.
Catchment Councils – Linked to ZINWA	Prepare outline plans, determine applications and grant permits for water withdrawals and use, regulate and supervise exercise of water rights and

	supervise performance of sub-catchment councils. Day to day water management is carried out by sub-catchment councils.
District Development Fund (now subsumed under the country's 53 Rural District Councils)	Tillage services to irrigators, maintains infrastructure e.g., boreholes and small dams. Plans and constructs small irrigation schemes.
Ministry of Local Government, Public Works and National Housing	Working through the Rural District Councils to mobilise the local community, farmer selection and irrigation plot allocation in smallholder irrigation development.
Environment Development Agency under the Ministry of Environment and Tourism	Environmental impact assessments for new irrigation schemes and dams, pollution abatement, environmentally healthy catchments, water quality.

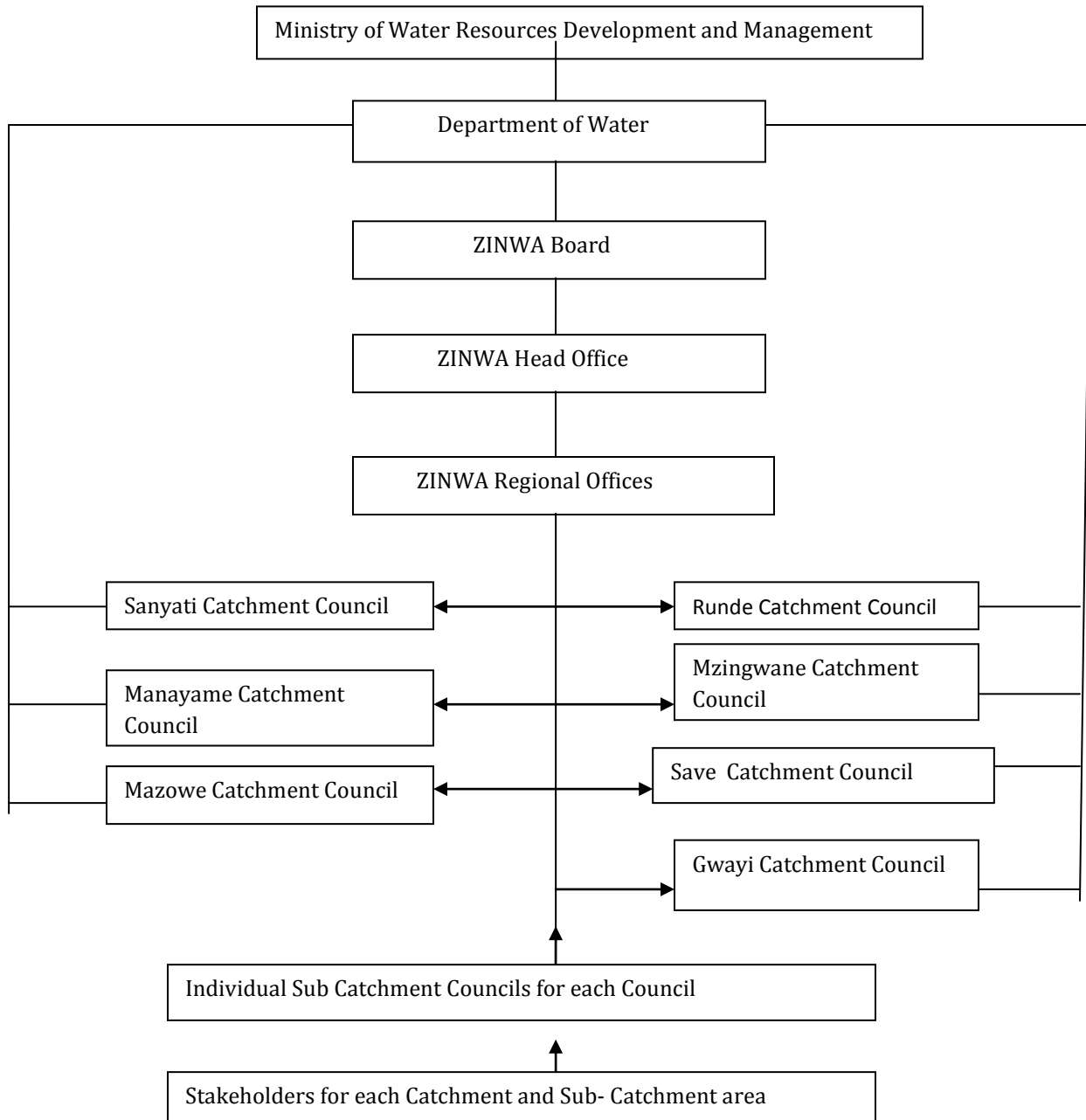
*Source: Adopted from Latham, 2002:150*

The detailed organisational arrangements for each of the service areas presented in Table 4.1 are set out below in figure 4.1.

Figure 4.1 gives an overview of the organisational structure of key institutions responsible for water resources management in Zimbabwe. The responsibilities of these institutions are founded in the Water Act (Act 31 of 1998) (GovZim, 1998a). The overview institutions presented in Table 4.1 and their various roles are not necessarily complimentary.



**Figure 4.1: Institutional arrangements for water services in Zimbabwe**



Source: Adopted from Gumbo, 2006:45

The centralising institution for water management and provision is ZINWA, which is a parastatal under the Ministry of Water Resources Development and Management. Its policies are generated by the Department of Water Development in the same ministry. Other service departments view themselves as specialist units providing advice to ZINWA albeit on the demand side. They do have their own mandates to fulfill and

ZINWA can only influence the way in which these agencies use water through pricing but not necessarily by making calls for conservation.

Zimbabwe is divided into seven catchments that are based on the six major river basins in the country mainly for management purposes. Administration of the catchment areas is carried out by an elected catchment council, with technical support from ZINWA. Overall guidance on policy matters is provided through the Ministry for Water Resources Development and Management.

The Department of Water Development under the Ministry of Water Resources Development and Management is mandated to carry out the following functions:

- water policy, laws and regulation development as well as overall guidance on the integrated management and planning of water resources in the country and ensure their effective management, protection and utilisation;
- ensure the availability of water to all for the primary purposes with due regard to environmental requirements;
- ensure equity in the allocation and access to water by all citizens;
- implementing and ensuring compliance to international agreements to which Zimbabwe is party to; and
- developing the criteria for water allocation and the issue of permits by Catchment Councils.

The main functions of the Zimbabwe National Water Authority (ZINWA) as set out in section 5 (1) of the Zimbabwe National Water Authority Act (Act 11 of 1998) (GovZim, 1998b) include:

- to advise the Minister on the formulation of national water policies and standards;
- to exploit, manage, and conserve water resources in order to ensure security of supply and to facilitate equitable access to water by all sectors, and its efficient utilisation, while minimising the impacts of drought, floods and other hazards;

- to provide specialist advice and technical assistance to local authorities and catchment councils in matters concerning the development, management and environmental protection of water resources;
- to provide design and construction services for new works and to operate and maintain water supply facilities owned or managed by ZINWA;
- to carry out and publish hydrological and geographical surveys, including water related research, for the purposes of planning, development, and exploitation of water resources; and
- to effect the joint management of international water resources, as directed by the Minister (GovZim, 1998b).

Catchment Councils (CCs) have the management responsibility of water at the lowest administration level of government. The CCs are established by a statutory instrument under the Water Act (GovZim, 1998a). CCs are made up of representatives of those sub-catchment councils (SCC) in each catchment. Each CC has the following responsibilities;

- preparation of Catchment Outline Plan for the river system within its jurisdiction;
- determination and awarding of water use permits in line with the criteria set by the Department of Water Development;
- supervision and regulation of the exercising of rights for the use of water in respect of its river system; and
- ensuring adherence to the Act and to supervise sub-catchment councils (GovZim, 1998a (Section 20) ).

The Minister of Water Resources Development and Management has the mandate to establish SCC in line with a statutory instrument under the Water Act (Act 31 of 1998) (GovZim, 1998a) for any part of a declared river system that falls under the catchment council. The SCCs main responsibilities include the regulation and supervision of the exercise of rights to water within the area for which it was established. The SCCs are made up of members of government department and water users (private and public)

who represent interests in the basin or have a direct stake in water management in the catchment.

#### **4.6 Institutional arrangements for urban water provision**

Urban water provision falls broadly under the jurisdiction of Urban Councils however, there are some key responsibilities shared with other key institutions. These institutions include the Ministry of Water Resources Development and Management, Ministry of Local Government and Ministry of National Housing and Social Amenities. In broader terms, the central government has the responsibility of being an indirect provider of water services in urban areas. Thus, the central governments' role includes that of regulation and approval of tariffs and municipal bye-laws as well as resource allocation through the national budget and the Public Sector Investment Programme. Local governments or municipalities assume the role of the direct water services provider as they have the responsibilities of ensuring that the actual water services are delivered to the end users.

The Urban Councils Act (Act 21 of 1997) (GovZim 1997) provides Local Urban Councils with a broader array of powers and responsibilities for the provision of services within their jurisdiction. These functions include the basic services of health services, water supply, sanitation, refuse removal and health services and a range of non-essential services. The local government through the Urban Councils Act (Act 21 of 1997) (GovZim, 1997), are empowered to collect revenues from the services that they provide as well as put into effect bye-laws that regulate public services within their given localities. In the case of Harare City Council, which is the focal case study of this research, water provision services bye-laws give the City Council authority to exercise the following:

- Water rationing.
- Disconnection of water services for non-payment of water tariffs, misuse contamination of water sources.

- Inspection of end user premises.
- Establishment and maintenance of water meters.
- Regulation or prohibition of bore holes and inter connection with water mains.

## **4.7 Urban water supply development**

### **4.7.1 Access to improved water**

After the attainment of independence in 1980, about 10 per cent of the population, largely in major urban centers, had access to improved water supplies. This essentially meant that 730, 000 out of a population of 7.282 million people in 1980 had access to safe and clean water. Two years after independence, the International Decade for Drinking Water and Sanitation was adopted by the government. The main tenets of this programme were the undertaking of government to provide every household with safe drinking water, with the water source within 500 meters (Manzungu & Van der Zaag, 1996:57). This undertaking paved the way for the adoption of key strategies in the water sector, notably, the National Master Plan for Rural Water Supply and Sanitation and the Integrated Rural Water Supply and Sanitation Program. According to the Country Status Overview for Water and Sanitation 2004, there was a 32 per cent to 56 per cent increase in the overall water coverage in the country (UNICEF, 2006:8).

By 2000 the overall coverage for urban areas was 100 per cent (UNICEF, 2006:8). Comparatively by such standards Zimbabwe had a lead in the provision of urban water supply services amongst other countries in Africa. In the period 1990 to 2000, the population of urban dwellers spiked from 1.6 million to 4.2 million (Khatri & Vairamoorthy, 2007:4). Table 4.2 highlights the different coverage percentages of some countries within Southern Africa in as far as urban water supplies are concerned by the year 2000. Notable cases of 100 per cent coverage are of Botswana and Namibia. Dramatic improvements in the water and sanitation coverage in some of the African states such as Zimbabwe have been attributed to investment support from the donor community, NGOs and strong government leadership within the sector (Manzungu &

Van der Zaag, 1996:57). Support to urban water programmes in the country was garnered from donor organisations such as the World Bank and IMF and co-funded through the government's Public Sector Investment Program (PSIP).

**Table 4.2: Water supply indicators for selected African countries (As per cent of total population)**

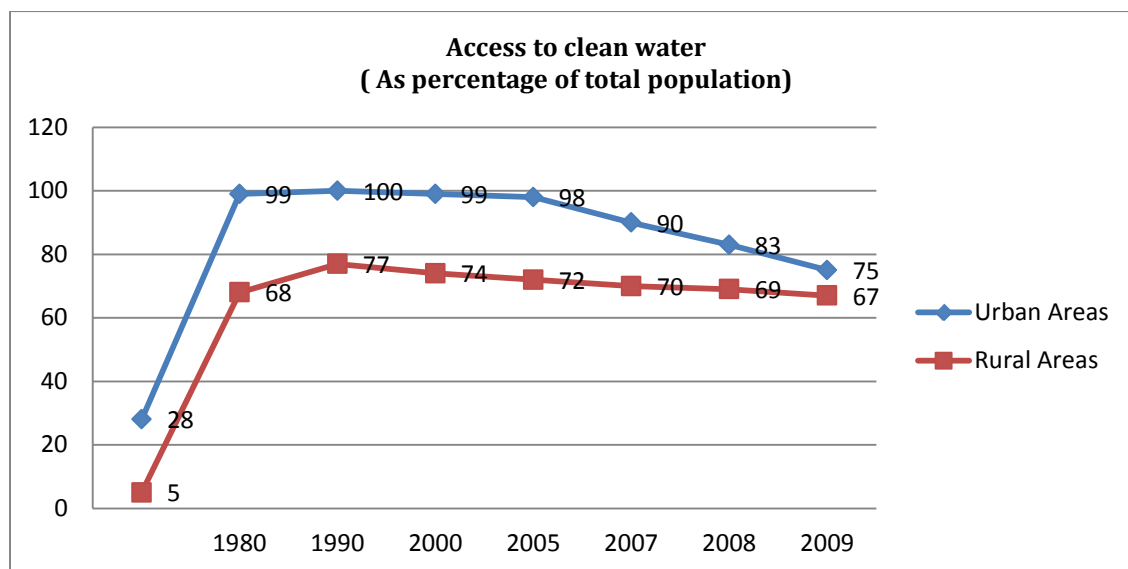
Country	Urban Population			Total population		
	1990	2000	2006	1990	2000	2006
Angola	..	34	62	..	38	51
Botswana	100	100	100	95	-	96
Lesotho	-	98	93	-	91	78
Madagascar	85	85	76	44	47	47
Malawi	90	95	96	49	57	76
Mozambique	-	86	71	-	60	42
Namibia	98	100	99	72	77	93
South Africa	-	92	100	-	86	93
Zambia	88	88	90	52	64	58
Zimbabwe	99	100	98	77	85	81
Sub Saharan Africa	81	82	81	49	55	58

Source: World Bank, 2009

#### 4.7.2 Water services provision from 2000 and beyond

The year 2000 was a turning point in the provision of water services to urban and rural communities in Zimbabwe. According to the CSO Report (UNICEF,2006:2), "... Zimbabwe's experience of water and sanitation sector development is that of a model of African sector development, collapsing within two decades. This reflects the vulnerability of sector service development built on state subsidies and donor finance, without sufficient focus on sustainability". From the year 2000 the quality of water services in urban areas witnessed a huge decline as well as in the number of people with access to safe and clean water. No new investment in water services infrastructure took place from the year 2000 to date. At the same time, maintenance and repair of the existing infrastructure was minimum resulting in a steady deterioration of the infrastructure. Figure 4.2 gives an overview of the decline of access to clean and safe water in urban areas in the country. There was also a considerable decline in the quality of the water and intermittent supplies in urban areas. The level of decline of water provision services became visible with the outbreak of cholera in August 2000. The national outbreak spread to most districts in the country and to neighboring states.

**Figure 4.2: Access to improved water supply in urban areas**



Source: Adopted from Institute of Water and Sanitation, *Water Provision Assessment, 2009:13*

It is important to note that estimates of the current levels of access to clean water are varied according to the source and timing of the surveys undertaken. Table 4.3 reports on estimates made by the Joint Monitoring Program (JMP).

Derived from the Ministry of Health and Child Welfare data on sanitation coverage, the National Action Committee inventory and urban council estimates that in 2008 only 46 per cent of Zimbabweans had access to improved drinking water. The May 2010 assessment carried out by the Vulnerability Assessment Committee (VAC) stated that the national average for access to safe water is 67 per cent and for rural areas the average is in the range of 63 to 77 per cent (ZIMVAC Report, 2010:35). These assumptions are broadly consistent with the VAC estimates in Table 4.3.

**Table 4.3: Water coverage estimates by source**

Category	Source of Estimate		
	JMP 2008	NAC 2008	VAC 2010
National	82	46	67
Urban	99	-	51-74
Rural	72	-	63-77

*Source: Adopted from Gumbo, 2006:32*

Assessments by the donor community of urban water provision services undertaken in 2009 in the wake of the cholera epidemic, specifically in Harare, highlights a picture of the collapse of waste water treatment facilities, seepage of raw sewage and effluent into the city water sources (UNICEF, 2011:26). The absence of a continuous flow of water in pipes consequently led to recurrent blockage of the sewerage systems. Water treatment facilities and water distribution systems were dysfunctional as a result of a lack of maintenance and repair. Revenue collections also deteriorated as water provision services declined, with unaccounted-for water at more than 40 per cent of supply.



## **4.8 Summary**

What is apparent from the discussion in this chapter is that without the refurbishment, recovery and development of water services facilities in most urban areas, Zimbabweans will continue to be susceptible to further cholera outbreaks with additional fatalities and illnesses, therefore negatively impacting on livelihoods and industrial growth of the country.

The legal and institutional framework that was developed for water services in Zimbabwe details the decentralisation of the management and administration of water services in the country. Zimbabwe still remains one of the countries where government dominance in direct service provision is visible. Local authorities or municipalities still hold key responsibilities in water service delivery which include operating and maintaining facilities, revenue collection and expenditure management. This has left service provision susceptible to any mismanagement or lack of financial investment. The regulatory framework in Zimbabwe does not clearly spell out how private sector participation could be fostered, accommodated or guided for water services delivery.

The following chapter assesses water service delivery in Harare Municipality through the local Municipality. Attempts at the involvement of the private sector in water service delivery in the absence of a regulatory framework that could guide such arrangements are also assessed.

## **CHAPTER 5**

### **Key research findings: Challenges of water provision in Harare Municipality**

#### **5.1 Introduction**

The findings of this research are presented in this chapter. The chapter begins with a review of the water supply situation in Harare Municipality as well as the general performance of the water utility. The quality of service provision was analysed in detail using information collected from the key informant interviews and data from household survey in 13 residential suburbs in Harare's Municipal area. This will be followed by an analysis of private sector participation in water provision in the Harare area.

#### **5.2 Background to the water supply situation in Harare Municipality**

Zimbabwe's urban areas have been experiencing water supply challenges for the past years under the management of Urban Councils and ZINWA. Zimbabwe is one of the few countries in Africa still using the government or municipal system of water management. Most African countries have adopted different types of privatisation of their water system as noted in chapter 3 of this study.

Research shows that water service delivery has been deteriorating dating from the late 1990s up to present day (Jonga & Chirisa, 2009; Musemwa, 2010; JICA, 1996). In the City of Harare, poor performance reached its peak during ZINWA's regime, causing continual water shortages as reported in the media (The Herald, 7 June 2009). According to Nhapi (2009:221), Harare is facing water quantity and quality problems, with serious pollution of the downstream Lake Chivero. These problems are attributed to rapid population growth, inadequate maintenance of wastewater treatment plants,

obsolete water infrastructure as well as a poor institutional framework. The resultant of which is water shortages in most of the residential areas in the City. The most affected areas are low income residential areas including, Mabvuku, Glen View, Tafara and Budiriro due to limited alternative sources of water and high population densities. Nonetheless, high income suburbs located in the eastern and northern areas of the city, for example Greendale, Glen Lorne, Hillside and Braeside have also suffered from this crisis as a result of the high level gradient on which they are located. See annexure 4 for the map of Harare showing residential areas.

The inadequacies in water and sewerage reticulation caused a number of households to rely on unsafe water sources in the past few years (Manzungu, 2005:35). The consequences have been devastating as demonstrated by the deaths of more than 4 000 people in 2008-2009 due to the cholera outbreak (Mason, 2009:87). By 10 January 2010 there had been 98,741 reported cases and 4,293 deaths making it the most devastating outbreak of cholera in Africa in the last two decades (UNICEF, 2010:14). Though the situation was contained with international donor assistance, the problem still persists as indicated by a typhoid outbreak in Harare in 2011/12. Since October 2011, Harare City has been experiencing outbreaks of typhoid fever. A total of 458 cases and eight deaths were reported at the end of the first outbreak on July 22, 2010. The second outbreak which was reported in October 2011 saw a total of 4 781 cases and two deaths being reported (WHO, 2012:23). The outbreak spread to the rest of the country, and the government acknowledged having no capacity to contain the outbreak (The Sunday Mail, 4-10 March 2012). The contamination of water and utilisation of unsafe water has been noted as the chief causes of the typhoid outbreaks as well as other diarrheal diseases in Harare.

The physical growth as well as the growth in population of the City of Harare has not been matched with the upgrading of the water system to meet the rise in demand (Nhapi, 2009:228). The absence of large-scale investment in water projects has also been a contributor to the poor state of water provision in Harare. The existing water infrastructure has aged to supply a population of more than three million people.

It is important to note that investment for water provision of water is not limited only to infrastructural development. The operational management of the water utility is crucial in improving service quality. The Harare water utility has been dogged with financial constraints as attested by the shortages of funds to secure chemicals for purifying water from 2009 to 2012 (The Sunday Mail, 30 September, 2012).

### **5.3 Water supply system**

An assessment of the quality of service delivery of the water supply systems in Harare is important in understanding issues regarding the availability of the water as well as quality of water services.

#### **5.3.1 Availability of water services**

Water availability is one of the many factors which influence the quality of service delivery in any given urban set up. To assess the consistency and level of regularity of supply of water for the Harare Municipality, it is important to first identify the water sources used for the City. A key stakeholder questionnaire was used to identify the main sources of supply for water in the City. The City Council water supply sources include Morton Jaffray and the Prince Edward water works, with the main water sources being Lake Chivero and Lake Manyame. The Prince Edward and Morton Jaffray Water Treatment Works supply the Harare metropolitan area and have design capacities of 90,000 m<sup>3</sup> per day and 614,000 m<sup>3</sup> per day respectively (JICA, 1996:56).

It was noted that most eastern and northern suburbs were not connected to the main supply system run by the City Council and were therefore getting water from alternative sources such as boreholes drilled within their residential stands. Key informants from the Harare City Council also attributed the erratic supplies of water to power cuts resulting in many parts of the City without water supplies. Given the challenges and

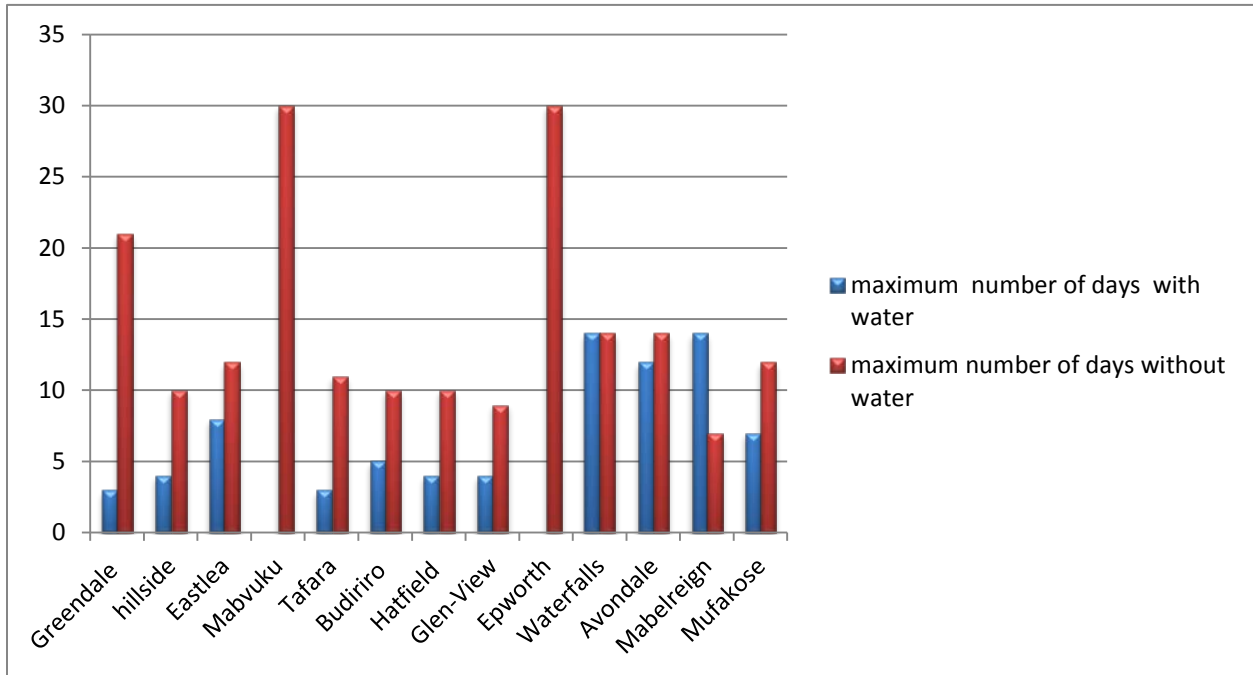
inconsistent water supplies, residents have resorted to use of unsafe water sources such as shallow unprotected wells (UNICEF, 2010:29). This has culminated in the cholera outbreaks of 2008 and 2009. There has been donor intervention through the provision of public boreholes for residential areas such as Glen-View, Glen-Norah, Mabvuku, Tafara and Epworth to improve access to clean water.

Reports by the media, (The Sunday Mail, 30 September, 2012), have highlighted Harare's water utility failure to provide its consumers with continuous running tap water. Some of the residents were going without tap water for several day hours. Reports by organisations such as Combined Harare Residents Association and Harare Residents Trust showed that many suburbs have been without running tap water for most of 2011. From the survey that was conducted for this research, out of 13 suburbs which were sampled, 5 areas had no continuous access to municipal water for a period of up to two weeks in the month of January 2012, this was as a result of the city council's extensive water rationing program.

In some residential areas such as Mabvuku, and Greendale, water had stopped running in their household taps for more than two years. In other areas such as Glen View, Hillside, Waterfalls and Mufakose, residents have had to rely on private boreholes, UNICEF donated boreholes, purchasing of water from water vendors or unprotected shallow wells. People have to wake up at night to do their laundry and fill up storage containers for household use. Other residents did not have tap water, evidenced by borehole drilling in low density areas and ongoing illegal deep well digging in high density areas. A study of Mabvuku, done by Hove & Tirimboi (2011) highlighted that that a considerable number of households in the high density area are depending on water from shallow and deep wells on their residential premises. These are however susceptible to contamination due to seepage as they are dug near sewage lines (Hove & Tirimboi, 2011; 65).

Figure 5.1 shows the availability of water in the 13 sampled suburbs in the month of January 2012. The month of January was selected to assess water provision purposively since it is generally expected that during the beginning of the year, water levels would be high in water bodies given that the month falls within the rainy season.

**Figure 5.1: Number of days with water availability in 13 residential areas**



Source: Data compiled by Author, 2012

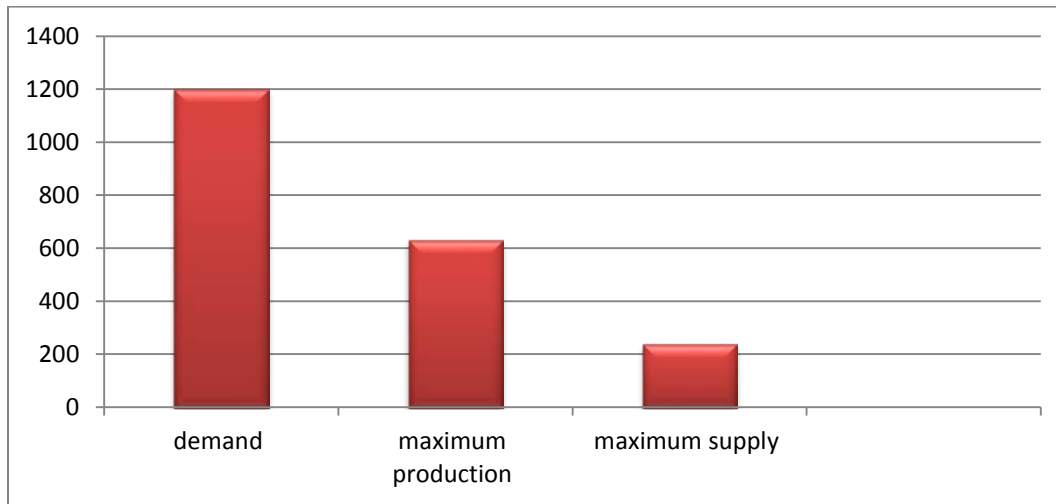
In most of the suburbs, tap water would cease flowing in the morning at 5am and only recommence flowing after 10pm in the evening. The hours of water availability were different between the different residential areas. Key informant interview respondents from the City Council, highlighted that the failure to maintain continuous supply of water in most residential areas in the City was mainly as a result of poor water demand management. It is important to note that the daily production rate from the two water works servicing the City cannot provide flowing water for 24 hours. Other major causes were power cuts, main pipe bursts and low pumping pressure.

Attention on water supply and availability is, therefore, one key area that needs to be addressed to ensure financial viability of the City's water utility.

Media reports show that service disruptions are common in Harare. According to The Herald (23 March 2010), Harare urban taps ran dry on the 18th of March 2010 due to a power cut and the situation returned back to normal over the weekend. Another widespread service disruption occurred during the second week of April due to some repairs at Morton Jaffrey and residents spent the weekend with dry taps (The Herald, 13 April 2010). It is also important to note that water availability and continuity of provision is determined by an areas' altitude. Residential areas such as Hillside and Greendale, only got water at night time when water pressure was high. Given the inconsistency of water availability, residents resorted to using unsafe water sources. This resulted in a typhoid outbreak in Mabvuku affecting more than 140 people with 5 deaths recorded in February 2010 (WHO, 2011:89).

### **5.3.2 Production and consumption**

The City of Harare relies on surface water for production purposes. The main abstraction sources are Manyame Dam and Lake Chivero for the Morton Jaffray Water Treatment Plant and Harava and Seke Dams for the Prince Edward Water Treatment Plant. The Town Clerk of Harare (Dr. Mahachi [Interview] 12 May, 2012), noted that Harare has a need of about 1200 mega litres of water on daily basis to cater for all residents. He however, noted that the City Council is only pumping 630 mega litres of water a day which is far short of the required litres. Figure 5.2 shows the daily production, supply and demand relationship.

**Figure 5.2: Harare water production and supply**

Source: Data compiled by Author, 2012

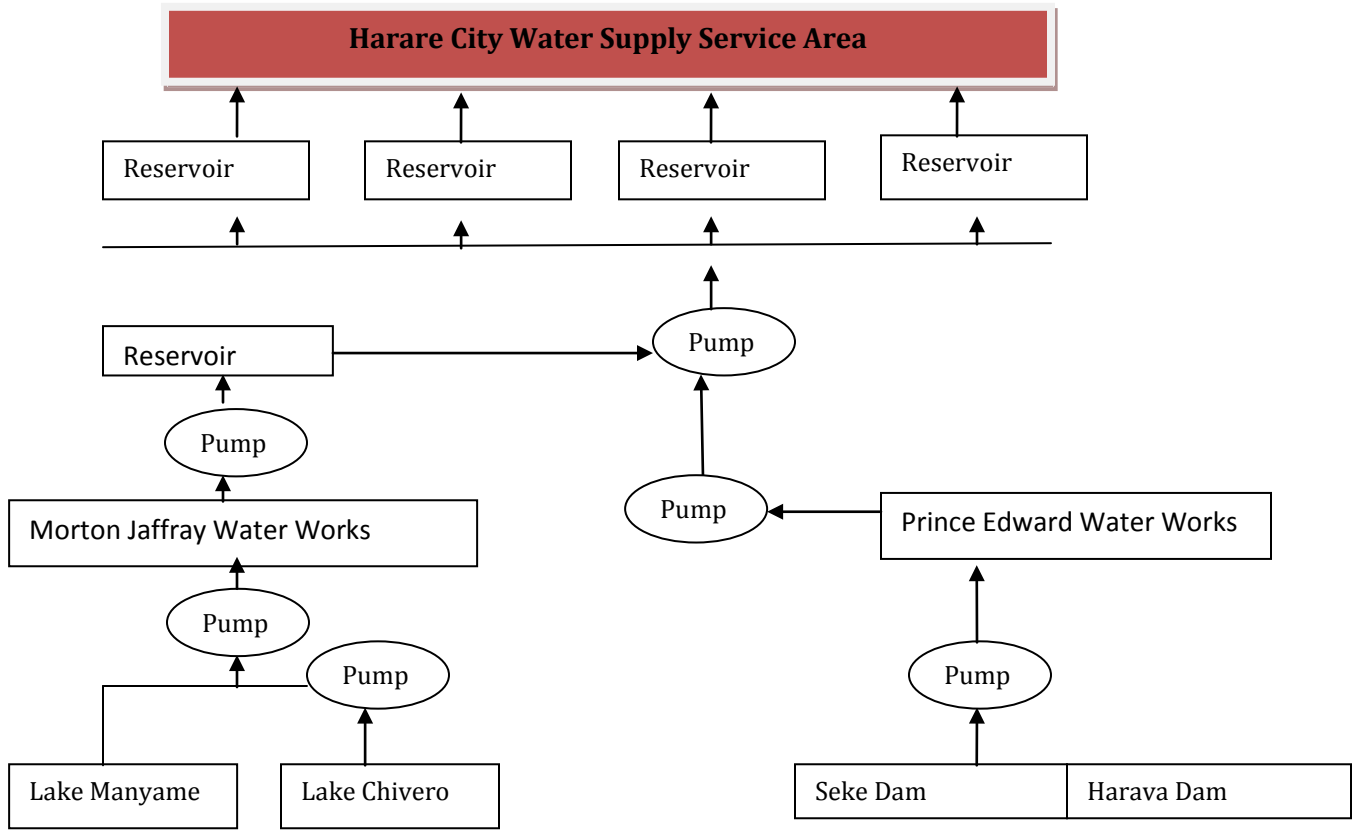
According to the Town Clerk, "...at the rate of which Harare is expanding we are likely to face a critical water problem in the next three years if no new water sources are built" (Interview, 12 May 2012). It is important to note that the water treatment plants servicing the City were built in the 1950s and no expansion of the water treatment plants subsequently followed in response to the growing population of the City.

Low production capacity levels have also been cited by key interview respondents from the City of Harare as a contributory factor to low production of water for the City. By design, the two treatment plants have a total abstraction capacity of 704 megalitres per day, however, the daily abstraction capacity of the plants have also gone down due to dilapidation. Figure 5.3 below gives an overview of the layout of the city's water supply system from the main water sources.

Given a projected water demand by of 1 400 000m<sup>3</sup> of water per given day by 2015 (JICA, 1996), there is definite need for a long term solution to meet the rise in demand in the next few years.



**Figure 5.3: City of Harare water supply systems**



Source: Adopted from Nhapi, 2009:226

## 5.4 Revenue collection

Part viii of the Urban Councils Act (21 of 1997) (GovZim, 1997) Chapter 29:15 provides urban councils the powers to provide and maintain a supply of water within or outside the council area. The provision of water has been a source of considerable revenue especially to urban councils through the collection of tariffs.

### 5.4.1 Billing and water tariffs

The ability and capacity of a water utility to finance expenditures related to operations and management is greatly hinged on the degree of freedom that the entity has in the management of revenues and tariffs within its jurisdiction. “The government of

Zimbabwe uses a “command” style of managing the economy and strictly controls tariffs by councils” (Hove & Tirimboi, 2011:77). Price controls by government are hence considered the main barrier to investment by the private sector in the country in general as this is a high risk factor for cost recovery.

It is important to note that Harare utilises a rising block tariff system together with differential in prices for different consumers in different localities or residential areas in the City. By 2003, the average tariff was about US\$0.10/m<sup>3</sup>, which was lower than an internationally accepted level of US\$0.75/m<sup>3</sup>. However, by December 2011 the tariffs had risen to US\$0.30/m<sup>3</sup>. This has remained below the US\$0.75 threshold. The lowest amount that residents could pay for water consumption is US\$ 10.75 per month and the maximum is determined by the consumption levels of an individual household given that there is no stipulated consumption ceiling enforced by the City Council. Table 5.1 shows cost per cubic meter for different categories of consumption.

**Table 5.1: Water cost per cubic liter**

<b>High Density Domestic Consumers</b>	<b>Water Tariff per m<sup>3</sup></b>	<b>Total Monthly Water Bill with Fixed Charges (US\$)</b>	<b>Cost per m<sup>3</sup></b>
Monthly cost for 6 m <sup>3</sup>	m <sup>3</sup> 0.30	6 6 m <sup>3</sup> =12.55	2.1
Monthly cost for 15 m <sup>3</sup>	0.30	15 m <sup>3</sup> =15.25	1.02
Monthly cost for 20 m <sup>3</sup>	0.30	20 m <sup>3</sup> =16.75	0.84
Monthly cost for 21 m <sup>3</sup> to 30 m <sup>3</sup>	0.40	30 m <sup>3</sup> =20.75	0.69
Monthly cost for >100 m <sup>3</sup>	0.70	>100 m <sup>3</sup> =>61.45	0.61
<b>Low Density Domestic Consumers</b>		<b>Total Monthly Water Bills without Sewerage Charge/ with Sewage Charges</b>	
Monthly cost for the first 20 m <sup>3</sup>	0.40	20 m <sup>3</sup> =18.75 /28.75	0.94/1.44
Monthly cost for 21 m <sup>3</sup> to 30 m <sup>3</sup>	0.50	30 m <sup>3</sup> =23.75 /33.75	0.79/ 1.13
Monthly cost for >100 m <sup>3</sup>	0.80	>100 m <sup>3</sup> =71.55 /81.55	0.71/ 0.81

Source: Data Compiled by Author from City Council Billing Department statistics, 2012

Harare City Council water bills were 30 cents per m<sup>3</sup> (for the first 30m<sup>3</sup> in high density residential areas). Despite the low water tariffs, residents have complained over excessive billing with notable examples in Kuwadzana, March 2010 bills which indicated consumption rate as high as 90 kilolitres, requiring residents to pay at least US \$40. Water bills were generating suspicion among residents given that some statements were based on estimates since the City Council was not undertaking consistent meter readings for the greater parts of 2010 and 2011.

It is important to note that Harare Municipality does not have free basic water given that all water is billed. This illustrates that the disadvantaged or poor are not catered for in as far as improving access is concerned. This potentially has negative impact on equity in water allocation at local level and the achievement of MDGs. The expectation overall is that all residents should pay fixed monthly charges. This has resulted in some residents accruing huge bills whilst other residents with private water sources have stopped paying fixed water charges.

#### **5.4.2 Non Revenue Water (NRW)**

Harare's NRW is estimated at 35-40 per cent of total production output. The remainder of 360 to 390 megalitres of the total production is then divided among domestic and industrial users. This explains the differences in production and supply depicted in figure 5.2. Water losses in the City have also been attributed to infrastructural dilapidation and pipe bursts. Combined Harare Residents Association Director indicated that the City Council take long to detect and subsequently repair burst pipes mainly because the reticulation system is not computerised (Mfundo Mlilo [Interview] 12 May 2012). Key informant interview respondents from Harare Residents Trust also indicated that some reported bursts went unrepaired for up to three months and Harare City Council attributed this to lack of capital to buy the required inputs for infrastructure maintenance.

NRW for Harare was noted to have gone down slightly from 45 per cent after rehabilitation of water pipes in the city centre. The levels of NRW losses however, remained excessive given that the acceptable rate of water loss for water performing well is 15 per cent to 25 per cent. Morton Jaffrey, for instance, was losing as much as 13 megalitres of water daily, which translates to 2 per cent of its production (The Herald, 25 July 2012). Although some renovations were done in the city centre between 2009 and 2012, the whole system including the treatment plants and pumping stations required a complete overhaul.

#### **5.4.3 Coverage**

According to key respondents from the Harare City Council, 98 per cent of the City is reticulated and the main cause of failure to attain 100 per cent coverage was the mushrooming of unplanned settlements such as Hatcliffe Camp. Another impediment to 100 per cent coverage was the establishment of Epworth and Dziwarasekwa Extension high density suburbs where residents settled without a reticulation system in existence. In order to improve the coverage of water service, it is imperative that Harare City Council refurbish dilapidated infrastructure and seek for alternative water sources in order to attain 100 per cent coverage.

#### **5.4.4 Connection fees**

According to key interview respondents from the City of Harare, the standardised connection fees for residential stands in the City of Harare are pegged at US \$50, the same amount is also required as a penalty or reconnection fees for disconnection made resulting from water bill arrears. Connection costs are usually required at the initial stages of servicing of residential areas by the City Council. There are however, some cases where residents moved in before servicing.

#### **5.4.5 Customer complaints**

Harare City Council pointed out that complaints from residents were mainly on water and sewerage bursts as well as billing and dry taps. Figures on the exact number of complaints as well as response period were not obtained mainly because there is no consistent and centralised way of capturing complaints. Some of the complaints are made at District Offices, whilst others are made directly to the Hotline Department at Water District Offices. It was observed that the response time to complaints varied depending on the type of complaint made, though the City Council targets to address all complaints in 24 hours. The City Council authorities pointed out that in some cases complaints took a lot longer to address as a result of circumstances beyond their control. A notable case regards complaints on dry taps in some residential areas which have been attributed to low water production. Financial challenges and lack of transportation have also been noted as contributing to long response period in repairing of water bursts.

#### **5.4.6 Cost recovery**

Exact figures on cost recovery were not obtained from the City Council for this study as these are regarded as sensitive information given the politicisation of water provision in the country (Musemwa, 2010:165). Key informant interview respondents from Harare City Council highlighted that the City Council also supplies bulk water to Norton, Chitungwiza, Ruwa and Epworth, however, these satellite towns owed the Council huge amounts of money in revenue for water provided. This is therefore a major drawback in service delivery and cost recovery. On the other hand the City required water chemicals valued at US \$ 2 million on a monthly basis for the water treatment plants servicing the City (The Herald, 13 April, 2010). An indicator of the inefficiency and lack of cost recovery is the failure by the Harare City Council to financially sustain water provision evidenced by water chemical donations from UNICEF (The Herald, 13 April 2010).

## 5.5 Infrastructure planning and funding issues

The planned expansion of the sewage and water treatment works and the development of alternative sources of water have not met the rise in demand for water services in the City. As highlighted before in this chapter, the total production capacity of water for the City is 630,000m<sup>3</sup>/d, which is lower than the current water demand. It is important to note that by design the water reticulation and sewage system for the City of Harare was meant to cater for a smaller population in 1956, but since then no extensive development has been done to cater for the ever growing population.

In a report released in June 2012, the Mayor of Harare noted that only 40 per cent of Harare residents have access to safe water. It was noted that there were huge infrastructural needs in the city in order for water production to meet demand. Notably, US\$15 million is required to rehabilitate the Prince Edward Water Treatment Plant; US\$17 million for Motton Jaffray plant; US\$15 million for the development and installation of a land information management system and a further US\$20 million to upgrade and capacitate the sewage treatment plants.

Nhapi (2009:231) argued that the Harare City Council would need affordable capital for water production projects, however, the chances of getting this money are hampered by the failure to produce audited accounts since the late 1990s (Nhapi, 2009:231). Good corporate governance, as reflected by financial accountability, is a prerequisite for borrowing money from both the private and the public sector. There are also other competing needs as the City is currently failing to provide services in many areas such as social amenities, primary health care, refuse removal and traffic lights. Media reports have also pointed out issues of corruption, gross mismanagement of council funds and annual budget that had higher percentages for administration and salaries than on service delivery components (The Herald, 24 August 2011).

## 5.6 Institutional and political issues

Water management and provision in any given situation ought to be protected from politics as it directly affects the well-being and livelihoods of citizens. “It is well-known that given a choice between water supply and sewage treatment, politicians will choose water supply because residents can easily see the results” (Nhapi, 2009:232). For instance, one of the major challenges regarding water provision in Harare is water quality. There is evidence of sewage intrusions into Lake Chivero and this essentially threatens the health of the residents of the City. However, illegal settlers developed an unplanned settlement closer to Lake Chivero. Though there was government action during “Murambatsvina Cleanup Operation” in June 2005 resulting in the removal of some of these settlers. The same settlers however, returned two months later when 9,000 residential stands were developed in the area by the government (Nhapi, 2009:232). The action of government disregarded the need to expand the sewage treatment facility as well as the effects the settlement have on water to Lake Chivero.

It is important to note that the operations of the Harare City Council have been crippled by intervention by central government. Notably, when the opposition-dominated council came into power in March 2002, the government instantaneously issued orders that all financial and manpower decisions by the City Council be referred first to central government for approval before execution. What this effectively meant was that central government through the Ministry of Local Government was in charge of City Council affairs. These orders were subsequently followed by the passing of the Public Order and Security Act 2009 (Act 15 of 2009) (GovZim, 2009a). This Act made public gathering without the sanction and clearance from the police a criminal offense. The police in reality refused to allow all public gatherings including those on purely civic issues on the basis of the Public Order and Security Act (Act 15 of 2009) (GovZim, 2009a). This made the interaction between opposition councilors and their constituencies virtually impossible (Nhapi, 2009:232).

In 2003 the opposition City Mayor was dismissed by central government and the majority of councilors were also dismissed in the following year on allegation of gross mismanagement. The central government established a commission made up of defected councilors from the opposition to manage the City Council by the end of 2004. The term of office for the commission was thereafter, extended by the central government for two terms of office (Nhapi, 2009:232).

Given the dominance of government in council affairs a number of problems have been attributed to this state of affairs. Notably, there is a tendency for political patronage to take precedence over council decision-making and technical competency resulting in conflict and low worker morale in the city council. Divisions in the workforce as a result of political patronage has bred suspicions and this has forced the city council closely guard information related to its operations from public usage. For instance, research and educational tours to council properties and infrastructure have to undergo scrutiny before authorisation could be granted. Research permits are also issued for any research to be undertaken related to council operations. The council's water and wastewater sites were declared high security zones where clearance from council is mandatory before any visits or taking of photos can be done. Most of the decisions taken concerning Harare's water problems are based on political expediency (Manzungu & Mabiza, 2004:46).

Civic organisations such as Harare Residents Trust as well as Combined Harare Residents Association have carried out lobbying campaigns against payment of rates on the basis that residents can only pay for services rendered. The campaigns were made in light of the unavailability of water as well as the non-collection of refuse in residential areas.

The transfer of municipal water management functions to ZINWA in 2005 was also considered a political decision. ZINWA does not have the technical capacity for water infrastructural management, maintenance as well as systems for billing of consumers. It



is important to note that the legislative instruments regulating water services provision, (Water Act of 1998 and Zimbabwe National Water Authority Act of 1998) are clear regarding the organisational structure and key operational responsibilities of ZINWA, which essentially are limited to national water resource development. However, the transfer of municipal water supply and sanitation systems to ZINWA by central government greatly distorted the functions of ZINWA as spelt out in legislation. Urban water supply is a specialised field requiring a lot of technical input plus also stakeholder involvement, which is provided for in the formulation of council budgets according to the Urban Councils Act (Act 21 of 1997).

## **5.7 Private sector participation in water provision**

### **5.7.1 PPP framework in Public Service**

The idea to utilise PPPs for infrastructural development in Zimbabwe was mooted as far back as 1998. PPPs are seen as “...a viable tool for unlocking private sector support in funding maintenance and development of critical public infrastructure in Zimbabwe” (Zimbabwe National Chamber of Commerce, 2009:20). The recognition of PPPs’ critical role in the provision of public infrastructure and services by the central government culminated in the development of a framework laying a foundation for PPP investment in the country. Dr Murerwa who was the acting Minister of Finance and Economic Development noted that the development of these Guidelines benefited from governments consultations with stakeholders and that the guidelines provide the parameters for the development of the appropriate legal and regulatory framework, to protect the interests of the investors and consumers (Zimbabwe National Chamber of Commerce, 2009:20).

The procedures and criteria for awarding of contracts such as Build-operate-transfer and concessions are defined in the guidelines. The various forms of PPPs that include

management contracts, leases, concessions and divestiture are defined as options to alternative public service provision arrangements. Institutional arrangements for facilitating the coordination, promotion and monitoring of PPP processes and implementation are provided in the guidelines. Various sectors for possible PPP implementation as well as financing of PPPs are stated in the guidelines. However, eight years on, the government frankly acknowledges that "...the PPP programme has failed to take off, hence the renewed focus by the government on capacity building and a review of the country's PPP policies and guidelines passed in 2004 and to incorporate input from other stakeholders, and enhance the role of the private sector in the provision of both infrastructure and basic social services" (Zimbabwe National Chamber of Commerce, 2009; 21)

There are PPP enabling frameworks found in other legislative instruments in the country. Notably, the Industrial Development Policy of 2002, Article 8 (Ministry of Industry and International Trade, 2002), "...recognises Government's capital constraints and its limited capacity to meet the growing demand for public goods and services and holds that if the private sector is given the appropriate support and incentives, it can gradually make large and indispensable contributions to the development of the economy" (Zimbabwe Chamber of Commerce, 2009:21). The Industrial Development Policy acknowledges that the main purpose of PPPs is to promote sustainable development, expansion, efficient and effective management of the public sector through joint collaboration between government and private sector.

The main objectives of PPPs identified in the Industrial Development policy include:

- to reduce government expenditure on the public sector by sharing infrastructural provision responsibilities;
- to enhance service delivery efficiency;
- to enhance use of modern information technology systems in service delivery;
- to improve access to skills and expertise;

- to promote and encourage direct foreign investment inflows into the public sector ;and
- to promote the participation of indigenous enterprises in infrastructural development and provision (Ministry of Industry and Trade, 2002:34).

In the Short-Term Emergency Recovery Programme of 2009 (STERP), a 12-month economic blue-print charting the road map for economic recovery put in place in 2010, the role of the private sector in financing public infrastructural development is recognised as well as the invitation of the private sector to partner with government. The STERP document also stated that “...participating private sector partners will be allowed special dispensations and privileges in the partnerships towards which they have contributed financial resources” (GovZim (STERP), 2009b:114).

The necessity of establishing PPPs for public sector infrastructural development is acknowledged by the government generally. However, the country does not have the legislative or operational framework for the engagement and establishment of PPPs. The PPP guidelines are inadequate as a guiding policy framework for the operations of PPPs in Zimbabwe. An appropriate conclusion therefore is that Zimbabwe has no PPP legislation at all.

### ***5.7.2 Engagement of the private sector in water provision in Harare***

In light of the deficiencies and challenges regarding water provision in Harare, the government and the Harare City Council accepted that the council had neither the capital nor the staff to meet the immediate and long-term water requirements which would result in an acceptable level of service delivery. The lack of financial resources for the council was exacerbated by the increasing difficulties in procuring government and donor funds for capital projects and the increased area for which the council was responsible. In this context, and with the experience of private sector initiatives in other municipal functions like the provision of water treatment chemicals and town parking

system management, the Council therefore decided to explore the possibility of private sector participation in water and sanitation services. The Minister of Water and Rural Development, Samuel Sipepa Nkomo, was noted in the media (The Herald, 9 December 2011) emphasising that the City of Harare needed to come up with a private utility to manage its water resources effectively as it did not have the capacity to treat enough water to meet the city's daily demands.

As early as 1996, the Harare City Council had identified potential water projects that included the Musanhi and Kunzvi Dams to cater for the increase in demand on the available water sources. However, the major constraint in the utilisation of these water sources was financial investment. The proposed project that took precedence was the Kunzvi Dam project especially because the project was expected to increase the overall output of treated water to the city of Harare by 50 per cent (Chitumba, 2011).

The project was also selected as the most effective alternative to water provision given that the water for the dam would be derived from a different river system to the Manyame catchment where all supply dams for the city of Harare and satellite towns of Chitungwiza and Norton are located. It was noted that the dam would boost the availability of supplies. Once operational, it is anticipated that the City would have over 700 000 cubic metres a day to supply consumers. The Kunzvi Dam site is located 67km northeast of Harare near Juru Growth Point on Nyaguwi River. The projected cost of the project was US\$539 million by end of 2011 (Dube, 2011).

It is important to note that, besides the option of private sector involvement in the dam project, the City Council considered securing loans from organisations such as the African Development Bank and the Bill and Melinda Gates Foundation (BMGF). It has been noted that regional and international financial institutions were interested in funding capital projects such as the Kunzvi Dam project, however, there is some reluctance by the institutions to deal with the central government of Zimbabwe given that the government has failed to honour obligations to France (US\$400 million) and Germany (US\$800 million) (The Herald, 24 October 2011).

The primary concern of the Harare City Council from the onset was that municipal resources were being drained for extraordinary levels of operation and maintenance, and that the status quo was not sustainable. The implication of this pressure was the need for a partnership with the private sector that would provide finance for investment in the deteriorating system and the skills and expertise needed to solve technical problems.

The City of Harare stated the objectives of private sector participation as follows:

- to delegate the tasks of managing and operating water and sanitation services;
- to access capital markets; and
- to improve effectiveness and efficiency in the delivery of services in the city (The Herald, 09 December 2011)

Right from the onset of the process of considering private sector participation, it was clear that the City Council was looking for an arrangement whereby the private sector participants would bring in the financial investment. This therefore, predetermined the type of arrangement that could be entered into thus limiting it to Build Operate Transfer form of partnership.

By July 2010, a consortium of private companies was identified for the contract to build the Kunzvi Dam. Vinci of France and Group Five of South Africa have been engaged as the major contractors. The two contractors, together with Locan Holdings (local), Development Bank of Southern Africa, Bigen (South Africa), Okada (Nigeria) and Swede Water, form the funding partners for the project under the name Kunzvi Dam Development Corporation. Under the contract, the identified contractors were expected to provide investment and operate the dam and its ancillary facilities for 30 years during which period it is expected to recover its investment before ceding the dam to government. The Kunzvi project comprises of the dam, raw water pump station, raw water transmission main, water treatment works, water reservoirs and a 1 400ha irrigation project. The memorandum of agreement was signed in December 2010 with

the expectation that by April 2012 the project would have started with an end date of 2015.

By the time of undertaking this study, the Kunzvi Dam project had not started and reasons noted were that the contractors had not secured funding. The delayed start of the project has been met with government threats to withdraw the contract awarded to the consortium (The Herald, 8 February 2012). Media reports also indicated the hesitation by the consortium to start the project given the high risk associated with the type/ form of arrangement for the project as well as the realisation of the severe state of water infrastructure in the City in general (The Herald, 24 October 2011). There is generally an uncertainty regarding the economy as well as the political environment in the country. The country is currently using the United States dollar as the main currency and there is no certainty regarding the currency in the future.

### ***5.7.3 Feasibility of successful public private partnerships***

Key informant interviews were conducted for the research with key stakeholders in government departments with the aim of garnering their views regarding the possibility of successful partnerships between the private sector and government and local authorities for water infrastructural development in Zimbabwe in general and Harare in particular. Interviews with personnel from the following organisations were carried out: Infrastructure Development Bank of Zimbabwe (IDBZ), Combined Harare Residents Association; Ministry of Economic Development; Ministry of Water Resources Development and Management, Harare City Council; and Institute of Water and Sanitation.

There were diverse opinions that came up concerning the possibility of establishing PPPs in light of the challenges faced with the Kunzvi Dam project. There were varied thoughts on the feasibility of private sector partnering with Government given the general distrust which exists between the Government and the private sector. From the interviews carried out, it was observed that a common thread is that there is a desire to

see an improvement in the delivery of services through a well-developed and well-maintained water infrastructure. The other shortcoming highlighted is the absence of local private sector investors with the financial capacity to significantly participate in arrangements for infrastructural development.

Another respondent alluded to changes in policies by central government as the greatest obstacle to private sector partnering with the government for provision of services such as water. Government still exercises control over the setting of tariffs for water meaning that there is high risk associated with cost recovery for a water project, hence the hesitation by the private sector to invest in the sector in particular.

Politics and political patronage was a factor which recurred in the majority responses for this research as a causal factor of non-commitment by private sector to partner with the government in Zimbabwe. There is skepticism of Government's commitment and direct involvement in service delivery given that in the past governments' populist policies that have taken precedence over appropriate business practices, for example the discounted tariffs for public services such as water.

## **5.8 Summary**

The problems inherent in the water services delivery in Harare Municipality are arguably as a result of the incapacity of the local authority to improve service delivery. The shortage of water in Harare has been as a result of lack of financial capacity by the City Council to upgrade water infrastructure to meet the rise in demand from population growth. The existing infrastructure as has been noted, is aged, resulting in leakages and failure. The situation in Harare has been further exacerbated by mismanagement and the economic crises the country faced since 2000.

The attempts at private sector participation have been unfruitful. There is clear interest by the private sector in partnering with the local authority for service provision, however, the right conditions for the success of such a partnership is not existent given the uncertainty regarding the economic environment as well as political environment.

The next chapter will therefore provide key recommendations regarding the engagement of the private sector in water services provision in the country and in Harare Municipality in particular.



## CHAPTER 6

### Conclusions and Recommendations

#### 6.1 Introduction

This chapter answers the question regarding the feasibility or possibility of private sector participation in water services delivery in Zimbabwe as a whole and particularly for the City of Harare. It further draws conclusions from the whole research, with future research recommendations. When making recommendations and conclusions the assessment of the key determinants of successful PPPs indicated in Chapter 2 of the study are considered.

The aim of the study was to analyse the existing state of urban water services delivery in Zimbabwe and assess the engagement of private sector through PPPs as a viable option for improved urban water services delivery.

The following objectives guided the study to:

- Analyse the current water provision arrangements in Zimbabwe.
- Draw lessons from the experiences in South Africa, Uganda, Botswana and Tanzania to get insight into key elements of successful and unsuccessful alternative service delivery mechanisms.
- Assess how the institutional and regulatory frameworks have allowed for private sector participation in urban water services.
- Examine factors contributing to the water provision challenges in Harare.
- Present recommendations on private sector engagement for local government water provision in Zimbabwe.

## **6.2 The changing role of Government**

In the past four decades, the role of government in the public sector globally has significantly shifted from that of direct service provision to a facilitation and monitoring role. Different public service reforms have been carried out in different countries and these reforms have subsequently defined the role of government in public service provision. It is important to note that the reforms were carried out against a background of poor public service delivery, fiscal crisis and a rise in government public expenditure. The traditional public administration model was seen as inefficient and unresponsive to the growing needs of consumers. Hence there was a need to make services more efficient, transparent, people oriented and responsive.

Public service reform was founded on the premise of different key ideological streams that include, NPM, Public Value, Network Governance as well as New Governance. Public sector reforms based on the principles of these ideological streams have seen the adoption of private sector style of management in public service provision. Emphasis has been on performance, restructuring of government entities through various means to ensure efficient use of resource and effective management for improved service delivery. Decentralisation and a reduction of the role of government in Africa have been noted in the public reforms through structural adjustment programmes. The adoption of PPP arrangements based on the principles of NPM, Network Governance as well as Public Value has also dominated public service provision as a viable option for improved water service provision.

## **6.3 Urban water provision: Some country experiences**

An analysis of urban water utilities in different African countries has shown different dimensions of organisational background and operational environment. However, there are common problems and inefficiencies of water utility companies have been identified as a major cause of poor quality of water services across water utilities in Africa. Cost

recovery in most utilities is a huge task given the high levels of water loss through infrastructural leakages. Revenues derived from water services have been insufficient to cover operational costs and expansion of water infrastructure as a result of the management style that is not commercially oriented or promote cost recovery.

Given the challenges faced in the provision of water services, governments have focused on institutional reforms as a way of enhancing customer focused, accountable, transparent, efficient and commercially oriented water services. Reforms have also seen the establishment of PPP arrangements such as service and management contracts, concessions, divestitures and leases.

The PPP arrangements adopted for water service provision in South Africa, Kenya, Tanzania and Senegal provide key lessons on the success factors of PPP arrangements. These include an enabling institutional and legislative framework, political willingness, clearly defined roles and responsibilities, the type of arrangement adopted, technical and institutional issues as well as financial roles. The lessons drawn from these country experiences are important in assessing the feasibility of adopting PPPs for water provision in Zimbabwe.

#### **6.4 Legal and institutional framework for water provision in Zimbabwe**

Institutional arrangements governing the water sector in Zimbabwe has undergone significant reforms since the 1990s. These institutional reforms were undertaken against a background of major constraints in water services delivery. These challenges are related to low water charges (often government subsidised) meager cost recovery rates and poor financial investment in infrastructural development. The decline in water sector investment as well as the deterioration of water infrastructure has prompted questions regarding the effects on the sustainability of water services. These questions on

efficiency and sustainability of water services have thus, motivated reforms in water cost recovery, management, administration and pricing policies in Zimbabwe.

The legal and institutional framework reforms in Zimbabwe defined the different roles of water institutions as well as the details regarding the decentralisation of the management and administration of water services in the country. However, despite the institutional and legislative reforms carried out in the country, Zimbabwe still remains one of the countries where government dominance in direct service provision is visible. Local authorities or municipalities still hold key responsibilities in water service delivery which include operating and maintaining facilities, revenue collection and expenditure management. This has left service provision susceptible to any mismanagement or lack of financial investment. The regulatory framework in Zimbabwe does not clearly spell out how private sector participation could be fostered, accommodated or guided for water services delivery.

## **6.5 Conclusions**

The following conclusions are drawn from the study:

Private sector participation through PPPs for water services delivery is a viable option for improved urban water provision for Harare. What are clear from the study are the benefits that could be accrued from the involvement of the private sector in water delivery services. The benefits have been noted through the case studies of Senegal, South Africa and Kenya, where different partnerships were established for water provision and performance as well as coverage of water provision increased.

In the case of Harare, the direct provision of public services by government through the local authority has resulted in deterioration of services. This scenario is noted as unacceptable and various theoretical ideologies have presented a basis for a reduction of the role of government in service provision and promoted the involvement of other actors in service provision to improve efficiency and effectiveness of service delivery.

This study demonstrated the importance of a legal and policy context and political willingness for the success of PPP arrangements. In the case studies presented in this study the existence of these conditions led to successful partnerships. The needed political will is important to ensuring that appropriate institutions, policies and laws are established to support PPP processes.

A supportive legal and policy context is an essential but not a sufficient condition for successful PPP initiatives. Public-private partnerships need to be underpinned by a well resourced administrative system. For example, in South Africa, within the National Treasury, a PPP coordinating unit was established to help, among others, in establishing standards and guidelines for PPP initiatives. Again, this illustrates both political will to use PPPs' as a mechanism in South Africa.

A major lesson in regard to policy and legislation is that PPPs need to be regulated. The creation of a government entity as a regulator through policy is important in ensuring PPPs success.

Private sector partners cannot commit themselves to long-term service delivery relationships without profit and where there is uncertainty regarding the economic gains and political environment.

### **6.3. Recommendations**

In order for private sector participation to be a viable option for urban water services in Zimbabwe in general, the following need to be done:

- There must be a PPPs unit in the country to oversee all registration and authorisation of PPP projects, situated in a higher office in the country rather than in some government department to give it the necessary legal and political muscle required to drive PPP projects. The PPP Unit will also support ministries and other public bodies to ensure that their PPP projects are carefully appraised,

scoped and planned prior to initiating a procurement process. The PPP Unit will ensure effective stakeholder engagement, market interest and momentum of the process. As Zimbabwe gains experience with PPPs, the PPP Unit will also develop guidelines on best practices to assist sector Ministries in the roll-out of their PPP projects.

- A clear policy framework must be included in the proposed PPP acts to include shareholder participation and extensively cover all the facets of partnership arrangements. Appropriate legal frameworks must be established for the implementation of PPPs in Zimbabwe. In other words, there is a need for an act of parliament to deal with the PPPs. The creation of a regulatory body through the legal framework is also important in regulating and monitoring PPPs in the country.
- There must be an attractive pricing policy so that partnerships in services provision are viable. The pricing should strike the correct balance between the need to reward the investor and at the same time ensuring that the service is affordable to the majority of the citizenry.
- There must be transparency in dealing with project promoters and political interference should not be allowed to hijack transparent implementation of PPP projects.

The City Council of Harare should consider a different PPP arrangement for the provision of water in the City. The arrangement for the use of a concession for service delivery has clearly failed to take off because of the capital involved in the project as well as the risks and suspicions associated with the project. Given these circumstances, the City Council should consider having a service or management contract with a private company either local or international. A management contract would allow the council to put the management of water, collection of revenue, computerization of the water system billing, and financial management in order before embarking on a long term and financially bigger concession arrangement. This strategy would also help build the confidence of the private sector in the City Council.

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## **ANNEXURE 1**

### **KEY INFORMANT INTERVIEW GUIDE FOR THE WATER SUPPLY MANAGEMENT SYSTEMS AND ADMINISTRATION ISSUES**

1. Which legislation governs water provision in the country?
2. What are the positive and key elements of legislation governing water provision in the country?
3. What are the negative elements of this legislative framework?
4. What are the main sources of water for the City of Harare?
5. What is the current water abstraction or production rate?
6. What is the current demand rate and water coverage? <sup>1</sup>
7. In your opinion what are the main challenges regarding water provision in Harare?
8. What do you propose as possible solutions to the water challenges?
9. What is current state of domestic water infrastructure?
10. What percentage of water is unaccounted for?
11. What are the contributory factors to the current rate of unaccounted water?
12. How are customer grievances/ complaints channeled and handled in the City of Harare?
13. What types of complaints come through to the City Council?
14. What are the current rates for water tariffs in the City?
15. What is the current fees for water connection ?

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<sup>1</sup> Follow up question on reasons on current water coverage rate

## **ANNEXURE 2**

### **KEY INFORMANT INTERVIEW GUIDE ON PRIVATE SECTOR PARTICIPATION IN WATER PROVISION**

1. In your opinion, is there private sector participation in the provision of public services in Zimbabwe?
2. What are the current levels of private sector participation in water services provision?
3. In what form has the private sector been involved in public service delivery in the country in general and specifically in urban water provision?
4. What is the current policy and legislative framework for the involvement of the private sector in public service provision?
5. In what way has the current policy and legislative framework encouraged/discouraged adoption of PPPs in the provision of services?
6. What other factors have promoted or hindered the possibility of government partnering with the private sector for water services provision in general?
7. Are there any plans for review or adoption of policy and legislative guidelines for the participation of the private sector in public services?
8. In your option what are the challenges regarding the provision of water in the City of Harare?
9. Given the challenges you have highlighted could private sector participation be considered as a solution to some of the challenges. – In what way?
10. Is there political willingness for the involvement of the private sector in the provision of public services- especially water?

11. In what way could private sector participation in the provision of public services be encouraged?
12. What benefits (if any) could be derived from the involvement of the private sector in the provision of urban water services?
13. Given the Zimbabwean context, what sought of measures could be put in place for private sector participation could be suited for the provision of urban water services?

## ANNEXURE 3

### HOUSEHOLD QUESTIONNAIRE

#### SELF INTRODUCTION AND PURPOSE OF STUDY

My name is Pennia Moyo. I am a student at the University of Stellenbosch studying for Masters in Public Administration. I am conducting a research as part of my studies and would like to interview you for a few minutes. The responses you give for this interview will be treated as confidential and your name will not be asked or provided to anyone else. Your participation in this research is voluntary and if you feel you no longer want to carry on please be free to indicate so. The information you provide will be very valuable for policy design and water management in Zimbabwe.

#### HOUSEHOLD INFORMATION

Name and Address of residential area.....

Date of interview.....

Name of interviewer.....

#### HOUSEHOLD DEMOGRAPHICS

1.1 How many people live in this household

- >10
- 7-9
- 4-6
- <3

1.2 Gender of Household head

- Male
- Female

1.3 What is the age of household head

- >65
- 50-64
- 40-49
- 30-39
- 18-29
- <18

1.4 Occupation of household head.....

**PART 3 : RESIDENTS' PERCEPTIONS ON SERVICE DELIVERY**

2.1 When does your monthly water bill come.....

2.2 Where do you pay your bills?.....

2.3 How often do you get water?

*Hours/Day* .....

*Days/week* .....

2.4 Did you experience water service interruptions this month?

- Yes
- No

2.5 If yes how many;

*Hours/Day* .....

*Days/week* .....

2.6 What time of the day is the water service normally interrupted?  
.....HOURS

2.7 Are you notified prior to these interruptions?

- Yes
- No

2.8 If yes, how are you informed about service interruptions?

- Media
- Public posters
- Leaflets at door posts
- Community Meetings
- Other .....

2.9 What are your top 2 complaints with regards to service delivery

.....

.....

.....

.....

2.10 Where do you report your complaints?

.....

2.11 Are you satisfied with the way your complaints are resolved?

.....

.....

.....

.....

**PART 4: ALTERNATE WATER SOURCES**

4.1 What is your current source of water for household consumption?

- Individual connection from the Council
- Private borehole
- Unprotected well (without a lid)
- Protected well (with a lid)

- Private supplier
- Rainwater
- Public borehole
- Community tap

4.1 If other sources of water are used other than municipal water, what are the reasons for usage of alternative sources of water

.....  
.....

4.3 How would you rate the quality of drinking water from the council connection?

- Satisfactory
- Unsatisfactory

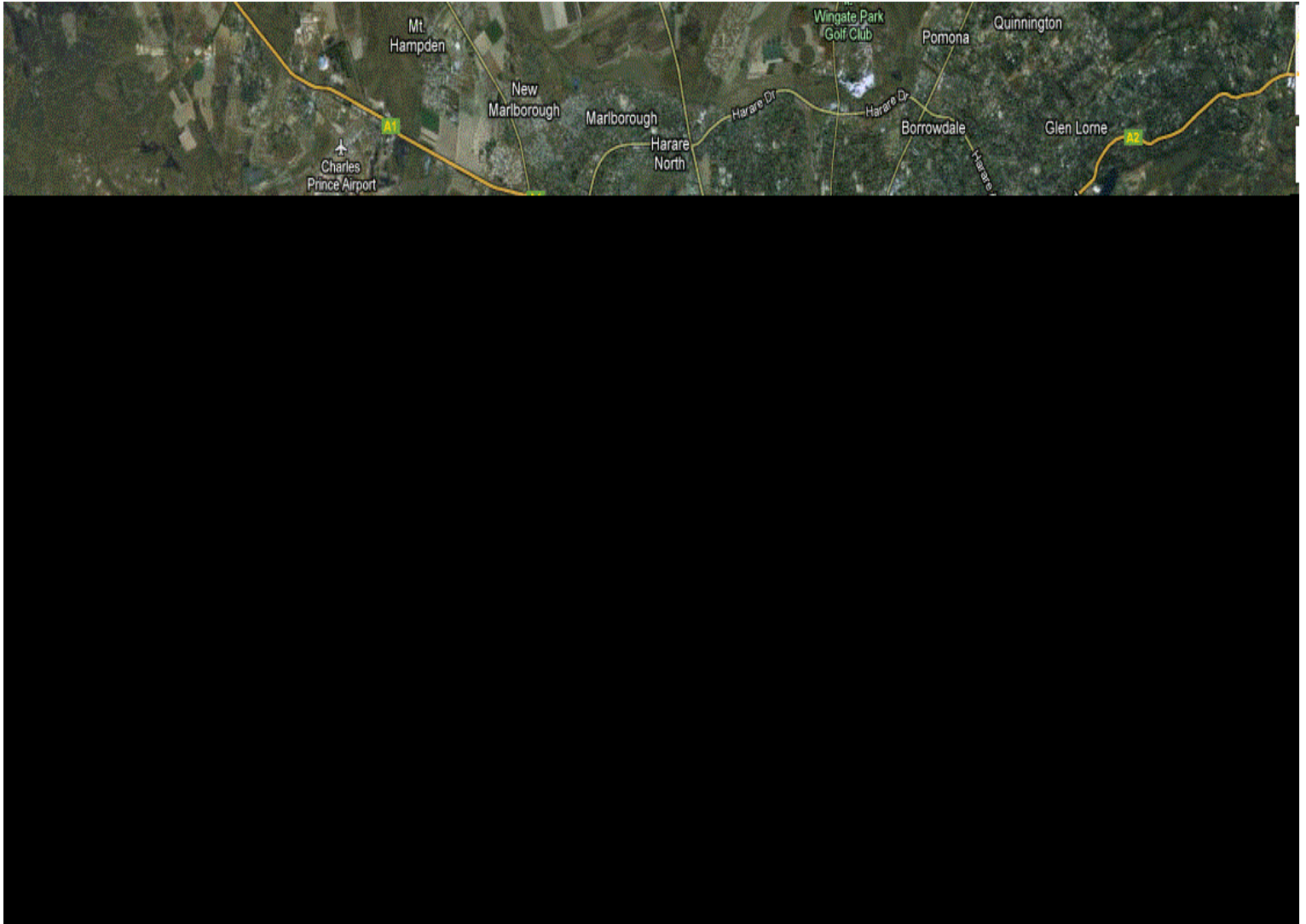
4.4 Give reasons for your answer

.....  
.....  
.....  
.....



## ANNEXURE 4

### SATELLITE MAP OF THE CITY OF HARARE SHOWING ALL RESIDENTIAL AREAS.



Source: Google Maps