

CHALLENGES FOR URBAN WATER SUPPLY: THE CASE OF MASVINGO MUNICIPALITY IN ZIMBABWE

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ABSTRACT

The problem of water scarcity in urban areas of developing countries is a major concern. The daily water supply rate in the developing countries is very low compared to the industrially developed countries. The objective of this paper was to determine the main challenges for urban water supply in Masvingo city in Zimbabwe and give policy recommendations on how these challenges can be addressed to improve water delivery services in the city. Structured questionnaires were used to collect information on water challenges from municipality workers. The study identified population growth, poor infrastructure, economic challenges and climate change as the major challenges affecting efficient water delivery in Masvingo city.

Keywords: Urban water challenges, Masvingo city, water scarcity, Zimbabwe.

INTRODUCTION

According to International Water Association (IWA, 2004), “access to good, safe and reliable drinking water is one of the most basic needs of human society and as such requires integrated approach, close cooperation and partnership between all stake holders”. Water scarcity is rising to the level of the number one problem of the world today (Chigwenya, 2010). Delivery of sufficient water volumes to urban populations constitutes a difficult logistic and economic problem. The problem of water scarcity in urban areas of developing countries is a major concern. Water shortage and the reduction of quality of water delivered are a potential disaster to the welfare of citizens of Masvingo city. Provision of sufficient water needs to be coupled with increased stakeholder involvement, institutional development and capacity building.

The main objective of this paper was to assess the challenges faced by Masvingo municipality in provision of adequate water to the citizens of Masvingo city. It

also examines ways of improving water provision to the city of Masvingo.

BACKGROUND TO THE STUDY

The raw water source for the city of Masvingo is Lake Mutirikwe as shown on Figure 1, which was completed in 1960 and pays Zimbabwe National Water Authority (ZINWA) for the bulk supply (Chigwenya A, 2010). Apart from providing water for the city of Masvingo, Lake Mutirikwe supports water supply schemes for several farmers and large sugar cane irrigation schemes in the Triangle and Hippo Valley areas. The storage capacity of the lake is 1.4×10^6 m³. City of Masvingo has 3 pumps which have the capacity of pumping 30,6 MLD and water goes treatment after being pumped into Target Kopje reservoir (10000 m³) and Cooden(8000 m³). Residents of Masvingo were in panic mode because of the increasingly dwindling water levels before 2013-14 rain season since it was estimated to be lower than 8 percent furthermore it was also almost empty during the 1991-92 drought.

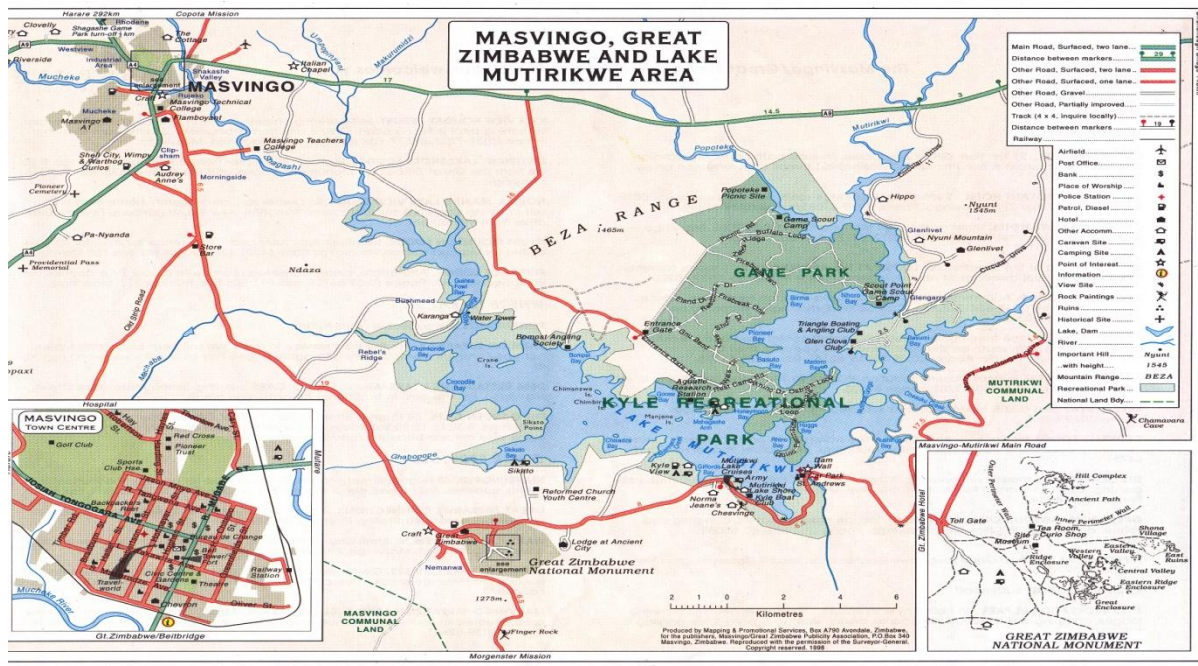


Figure 1: Masvingo water supply system and surrounding areas

Source: Mapping and promotional services (1998)

According to Chigwenya (2010) Masvingo is the oldest urban establishment in the country. It was established as a fort for the pioneer column during the occupation of Zimbabwe by the British in 1892 and they named it Fort Victoria after Queen Victoria. The city is basically surrounded by primarily agricultural industries with a few mining ventures and low veldt sugar plantations are the only meaningful agricultural activities that operate at commercial scale. After independence it was renamed Masvingo after the world heritage cultural centre, the monuments of Great Zimbabwe. Masvingo city registered some significant progress in development, after independence, which allowed it to be accorded municipal status in 1995. The

city can now boast of expansive residential areas of close to 3000 0000 residential stands and its industrial areas had managed to attract very big industries such as Steel Makers, National Foods, Chibuku, Cold Storage Commission, Plate Glass, and several other small industries (Chigwenya A, 2010).

Masvingo city is witnessing a rapidly growing population which has further exacerbated water scarcity. The City had a population of 69490 in 2002, (Central Statistics Office, 2002) but it had reached 87886 by 2012 (ZIMSTATS, 2012). Masvingo municipality is failing to provide adequate water to the people. Table 1 shows that water supply systems in Masvingo are barely coping to provide enough water to its residents.

Table 1: Situation of water supply in some parts of Zimbabwe

City		Population	Water Supply		
			Installed Capacity (m ³ /d)	Actual (m ³ /d)	Demand (m ³ /d)
1	Harare	2,500,000	704,000	645,000	1,200,000
	Chitungwiza	1,000,000			
2	Mutare	300,000	65,000	54,000	75,000
3	Kwekwe	120,000	90,000	45,000 [^]	36,000
4	Chegutu	120,000	12,000	8,000	36,000
7	Masvingo	110,000	30,000	23,000	48,000
	Total	4,150,000	901,000	775,000	1,395,000

Source: African Development Bank Group (2010)

According to the findings of the Rapid Response Assessment undertaken by UN Environment Programme and UN Habitat in 2010 the number of urban Zimbabweans without access to safe drinking water rose from close to 250,000 in 1990 to more than 2.1 million in 2010 posing a significant challenge to achievement of the Millennium Development Goals by 2015.

It is almost two years since Zimbabwe witnessed the worst cholera outbreak ever in the country. According to statistics from the World Health Organization almost 5 000 out of close to 83 631 people who were affected including children died as a result of the disease. The outbreak was obviously imminent following serious problems with water provision in most urban areas including in Masvingo. The outbreak of cholera in Zimbabwe was inevitable following long periods of most urban and rural homesteads going without clean and safe drinking water and inadequate treatment of sewage.

In 2005 due to unexpected institutional changes which transferred all the urban water supply and sanitation services from

the local authorities to Zimbabwe National Water Authority (ZINWA) and then back to local government control after only 4 years (African Development Bank Group, 2010). The transition was carried out without adequate preparatory work that led to both loss of more production capacity and a further deterioration of the services. Zimbabwe is one of the few countries in Africa still using the government or municipal system of water management. 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.

Rukuni (2006) noted that most of the water challenges been faced in urban areas are a consequence of mismanagement and reluctance by the Ministry of Local Governance to let the city council independently run water supply and sewer reticulation management. Moreover, Chigwenya (2010) also concluded that decentralization of local authorities has been curtailed by the heavy presence of the government's hand in all sectors, as it continued to interfere with the day to day

running of the municipality affairs. This therefore means that the local authorities lack autonomy in making independent decisions and policies towards addressing this water crisis.

Research Methodology

The research utilized both qualitative and quantitative methodologies. Structured questionnaires were administered to the workers of the municipality to find out the challenges they face in provision of adequate water in Masvingo. The data collected from questionnaires was analysed using a computer package called SPSS and presented in frequency graphs.

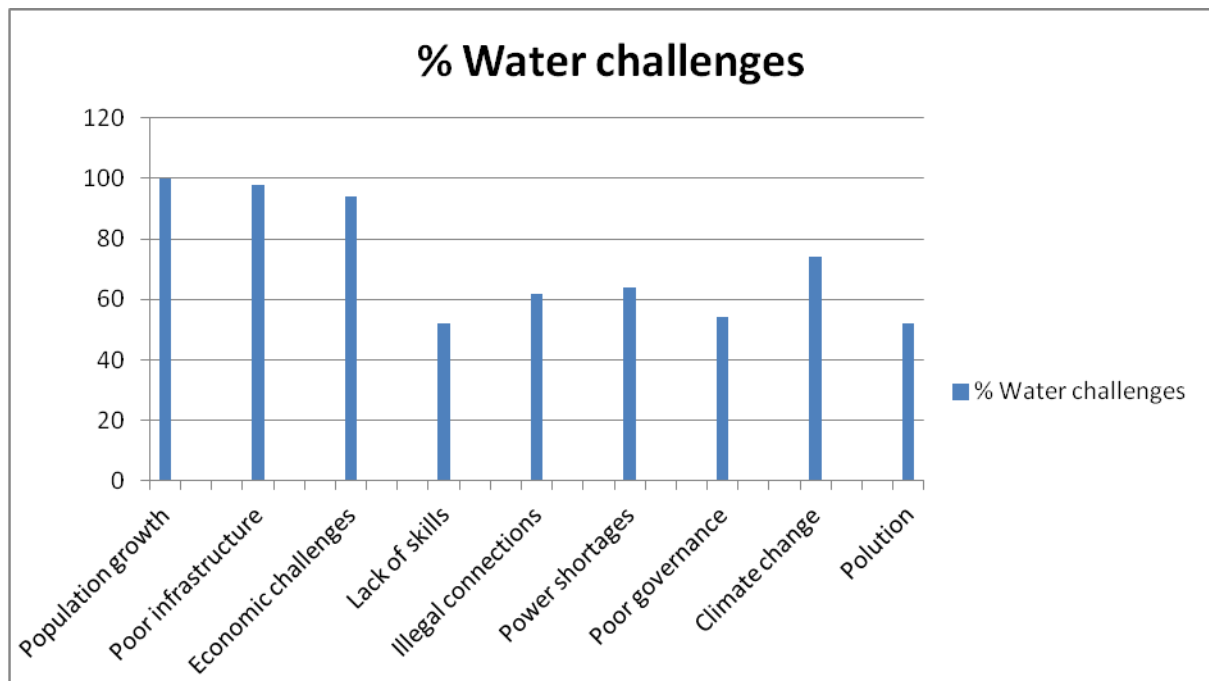
Selection of the Study Area

The choice of Masvingo municipality as the study area was influenced by the personal experiences of water shortages by authors who reside in one of the communities in the town.

Tools of Data Analysis

Statistical techniques were used to analyze the data obtained from the field. Some of the computer software applications used for the survey were Statistical Package for the Social scientists (SPSS), MS Excel, MS Power Point and MS Word. The results were presented in both quantitative and qualitative terms. Inferences and calculations were made from these measures and compared with the existing literature to arrive at the conclusion of the study.

Results



The study identified population growth, poor infrastructure and economic challenges as the major challenges affecting efficient water delivery in Masvingo city. However, the study carried out by Curry (2010) established that lack of adequate sanitation and industrial pollution were among major factors

contributing to water scarcity in United States.

Moreover, these results indicate that climate change is a long-term threat to efficient water provision for the present and future generations which was in line with the findings of Curry (2010). The changing climate is exacerbating water management problems in Masvingo

through its impact on variable rainfall and extreme events like drought.

Recommendations

It must be realized that efficiency is a must, because poor performance only hurts the poor as the rich have other coping mechanisms like drilling boreholes. Addressing population growth and climate change together should be a top development priority if Zimbabwe is to improve water delivery and achieve sustainable development. Furthermore, the municipality of Masvingo with the help of the government should aim to identify and develop more water sources since the urban population is rapidly increasing. Furthermore, the government should strengthen climate change coordination and promote the multidimensional nature of climate change.

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