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Bulk Water Suppliers in the City of Harare – An Endogenous Form of Privatisation of Urban Domestic Water Services in Zimbabwe?

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ABSTRACT: This paper investigates the phenomenon of bulk water suppliers in the city of Harare, Zimbabwe's largest urban metropolis and capital. Bulk water suppliers began in 2005 to sell domestic water to middle- and high-income suburbs because of shortcomings in the city's water delivery system without state regulation, and have since become a permanent feature of the Zimbabwean urban waterscape. The study was conducted between 2012 and 2013 in three up-market suburbs of Harare, which were known to depend on bulk water suppliers. State regulation of bulk water suppliers was introduced in 2013, close to a decade after the start of operations, indicating a reactive and reluctant acknowledgement that bulk water suppliers were now significant players in water service provision. The regulation was, however, poorly conceptualised, based on potable water standards, which proved to be cumbersome and placed onerous demands on the suppliers. The paper concludes that bulk water suppliers are playing a critical role in water service provision in Zimbabwe's largest metropolis and represent a spontaneous injection of local private capital in the urban domestic water supply sector. They can therefore be seen as a viable endogenous form of privatisation of urban domestic water service (as contrasted to multinational companies) but should be viewed as complementing rather than replacing functional urban water supply systems. The operations of bulk water suppliers can be enhanced if a regulatory regime, informed by realities on the ground is crafted.

KEYWORDS: Urban domestic water supply, privatisation, waterscape, bulk water suppliers, Zimbabwe

INTRODUCTION

A significant proportion of the human population in many regions of the world, and Africa in particular, faces challenges of accessing safe drinking water and adequate sanitation. The 2013 Millennium

Development Goals (MDGs) Report observed that although the world was on track to meet the target of halving by 2015 the proportion of people without access to safe drinking water, Africa was unlikely to meet the target for reasons to do with political instability, increasing population, and lack of finances to invest in new and existing infrastructure (UNECA et al., 2013). The same report notes that Africa accounts for 40% of people without access to safe drinking water – the majority of whom are found in sub-Saharan Africa, which also accounts for over 90% of the world's cholera cases because of a combination of water shortage and poor sanitation.

There is poor water supply and sanitation provision in Zimbabwe, which is a low-income, southern African country that achieved political independence from a succession of white minority administrations some 35 years ago, and it is a microcosm of the dire state of social services provision in many developing countries. In practically all such countries, the economies of the new states could not and cannot support the much needed basic social services to cater to the formerly marginalised majority population. The problem can be characterised as a failure to transform the economies to meet expectations of the new social order, a problem that has proved to be just as difficult as the road to achieving political independence. Faced with this challenge, developing countries have either acquiesced to privatisation of water services often spearheaded by the Bretton Woods institutions as part of Structural Adjustment Programmes (SAPs) or found themselves having to rely on donor funds, which ironically originate from yesteryear's colonisers. Both options have been found not to provide lasting solutions.

Viable alternative solutions to provide safe water seem to be elusive in African urban spaces (and in other parts of the developing world). African urban areas, because of their unique characteristics, are therefore the perfect stage upon which to interrogate how this conundrum can be resolved. Urbanisation in Africa is spreading fast – it increased from 15% in 1960 to 40% in 2010 and is projected to reach 60% in 2050 (UN-Habitat 2010). How to provide essential social services such as safe water for this large concentration of people is a challenge, given the limited infrastructure. There are severe inadequacies in water supply and sanitation, which tend to compromise the health of its residents, confirming the observation that "every form of urban life depends on water but is simultaneously threatened by it" (Swyngedouw, 2004: 49 cited in Musemwa 2010).

The state of water supply and sanitation in Zimbabwe exhibits all the characteristics that have been described above. At independence in 1980, access to safe water in urban and rural areas was estimated to be around 99% and 40%, respectively, while access to adequate sanitation stood at 99% and 30%, respectively (Manzungu and Machiridza, 2005). The exceptionally high figures in urban areas were a historical statistical construct, thanks to the white regimes which exercised power since 1890. Before independence in 1980, the majority black population was not welcome in urban areas. Only labourers were allowed but these were restricted to a few settlements (Zinyama et al., 1993). The new post-colonial government was largely content with the water supply situation in the urban areas until two decades after independence. Musemwa (2010) argues that since rural, and not urban areas were the political support base of the liberation movements (ZANU PF and PF ZAPU), the state concentrated its efforts towards provision of water services in the rural areas. As a result, the first decade of independence (1980-1990), witnessed an impressive improvement in the proportion of the population with access to safe water in rural areas rising to 70% (Manzungu and Machiridza, 2005). The neglect of urban areas, however, proved to be short-sighted and later on came to haunt the state (see below), especially because of an expanding urban population which the government contributed to through relaxation of migration into urban areas and construction of new housing settlements (Zinyama et al., 1993).

The failure of the IMF/World Bank-supported Economic Structural Adjustment Programme (ESAP) that the government adopted and implemented between 1990 and 1995 contributed to the problem. It did not develop the economy as expected, to fund vital social services such as water supply and sanitation. This provided the impetus of the perfect storm that water supply evolved into. This was

worsened by challenges relating to transforming the economy to include the black majority population. The land reform programme was part of such a discourse, which contributed to withdrawal of donor support, because of political differences with the government. Owing to a combination of political, social and economic challenges, water and sanitation facilities and services deteriorated significantly between 2000 and 2008 (AMCOW, 2012). In rural areas, the proportion of the population with access to safe water decreased from 70% in 1999 to 61% in 2009 while access to adequate sanitation decreased from 60% in 1999 to 30.5% in 2006 (Zimbabwe 2010; AMCOW 2012). There are no up-to-date statistics in urban areas. However, the 2008/9 cholera outbreak that killed over 4000 people, mainly in urban areas, demonstrated the dire state of water supply and sanitation in urban areas (Mason, 2009).

Harare, Zimbabwe's largest urban metropolis and capital, epitomises the magnitude of water shortage in the country's urban areas. The city's water supply, which also caters to the neighbouring towns of Chitungwiza, Norton, Ruwa and Epworth, provides water to 16% of Zimbabwe's population of 13 million (Zimstat, 2012). Since acute water shortages in the city started around 2001, the City Council has been trying to contain the situation by implementing water demand management (Manzungu and Machiridza, 2005) as well as financial mobilisation towards investment in new, and repair of existing infrastructure. But the gap between demand, estimated at 1400 megalitres/day, and supply has kept rising, causing an increase in the period of water shedding in parts of the city from 24 hours in 2005 to over 72 hours in 2014 (Nhapi, 2009). The pumping capacity of the city's water supplies of 450 megalitres/day can only satisfy 40% of the city's population of over two million in 2015 (Zimstat, 2012). The protracted failure by the City Council to satisfy the water demand of residents has forced residents, companies and other institutions in the city, to search for alternative water sources that include digging shallow wells, drilling boreholes, putting up storage tanks, undertaking water conservation, and sourcing water from bulk water suppliers (Manzungu and Chioreso, 2012).

Meanwhile, away from the public glare, there was a spontaneous and unsolicited injection of local private funds in Harare's urban domestic water supply sector. Beginning around 2005, bulk water suppliers began to appear on Harare streets delivering water to water-stressed middle to high income suburbs.¹ Since then bulk water suppliers have become a permanent feature on Zimbabwe's urban waterscape, and have successfully weathered the early barrage of criticisms that they were operating illegally (they were legalised in 2013). The spontaneity and persistence of bulk water tankers, against a backdrop of attempts to restructure the city's municipal water supply system, raises the question of what conditions facilitated their emergence and survival from 2005 to 2013 and beyond. This paper investigates the phenomenon of bulk water suppliers in the city of Harare, Zimbabwe's largest urban metropolis and capital. In this endeavour the focus is on the adequacy of the legal framework, and how bulk water suppliers have operated under the new legal dispensation. This is an important question because bulk water suppliers tend to reach the unreachable areas, as was found to be the case in a number of African countries (Schwartz, 2008; Ahlers et al., 2012), and may continue to exist even if Harare's water services improved or are commercialised or privatised.

To address these issues, the paper in the first instance provides a conceptual framework to understand the nature of the problem. The conceptual framework, which is based on the notion of an urban waterscape, is used to assess urban water supply in Harare over time, highlighting the major events and processes that shaped the current situation, and how this has shaped the solutions that have been proposed. Subsequent sections explore the emergence of bulk water suppliers and how the state has tried to "improve the situation" by formalising them. The last section of the paper discusses

¹ They are commonly referred to as private bulk water suppliers and are described as being "akin to privatisation repackaged in a new form" (Prasad, 2006).

the main findings and provides the conclusion in relation to how the operations of the bulk water suppliers can be enhanced.

CONCEPTUAL FRAMEWORK

The impacts of the failure of public utilities to provide adequate water (and sanitation) are well documented – poor service coverage, high unaccounted-for water, overstaffing, low tariffs, poor consumer records, inefficient billing and collection of water revenues (Schwartz, 2008). This situation triggered a worldwide search for solutions. In the 1980s and 1990s, privatisation of water services became fashionable because of claims of superiority of the market to deliver efficiency (value for money) and effectiveness (water supply coverage) modelled on the basis of decentralised systems and a small role for the state (Robison and Hewison, 2005). It was envisaged that this would tackle corruption, unaccountability, financial impudence and incompetence, which had crippled the capacity to expand and upgrade water services (McDonald and Ruiters, 2005; Prasad, 2006). This ideological persuasion saw water privatisation being adopted in diverse countries such as England, China, Argentina, the Philippines, Bolivia, Mozambique, Uganda, South Africa, and Tanzania (McDonald and Ruiters, 2005). In developing countries it was championed by the Bretton Woods institutions as part of a broader neo-liberal agenda. But water privatisation failed to meet expectations for a variety of reasons (Box 1).

Box 1. Why privatisation of water has failed

- Overly concerned with profit
- Lower-than-promised investment
- Concentrated in rich areas where financial rewards are greatest
- Overcharging the poor
- Saving costs at the expense of service
- Poor regard of welfare of employees
- Bribery and corruption such as under-bidding and under-invoicing

Source: Robbins, 2003; Davis, 2004; McDonald and Ruiters, 2005; Prasad, 2006; Mulreany et al., 2006; Ainuson, 2010.

The trend toward privatisation resulted in a long and growing list of failed experiments that include Buenos Aires (Argentina), Atlanta (United States of America), Manila (The Philippines), Cochabamba (Bolivia), Jakarta (Indonesia), Nelspruit (South Africa), Maputo (Mozambique), and Dar es Salaam (Tanzania) (Prasad, 2006). After the initial enthusiasm about privatisation, international water companies came to realise the mounting problems associated with water privatisation. Robbins (2003) and Schwartz (2008) observe that the companies are no longer keen to invest in developing countries due to low returns and perceived risk.

The backlash against privatisation caused a rethink of the concept. By 2003 there was a major shift in international water policy from advancing privatisation to commercialisation of water supply management. For example, delegates to the world's Water and Environment Ministers meeting in Kyoto agreed to support private sector financing but acknowledged that new mechanisms for private sector involvement in water supply management had to be devised (Bakker, 2007). Table 1 presents the different forms of organising involvement of the private sector or private-sector principles. The emergence of the principle of water as a basic human right, social solidarity and equality of citizens (Prasad, 2006; Leys, 2008; Herman 2009; UN, 2011), and calls for the public sector to be brought back in water service provision (UNDP 2005; Mulreany et al., 2006), have been proposed.

Table 1. Main categories of water reforms and their characteristics.

Type	Definition
Privatisation	State property rights relating to water resources or delivery services are turned over to the private sector
Private partnerships	Aimed at asset and resource management re-organisation
Private public partnerships (PPPs)	Post-1990 privatisation has tended to follow private public partnerships (PPPs) where the state outsources water supply system management to private companies while retaining ownership of the assets and is not involved in the actual operations, but provides oversight of the operations
Public management model	Involves urban local authorities running autonomous water business units, which is quite common in southern Africa
Corporatisation	Municipal water supply is converted from a local government department to a publicly owned institution to effect organisational reform
Commercialisation	Performance incentives and sanctions are used to encourage full cost recovery
Marketisation	A water market is created to reform resource allocation and governance

Source: Adopted from McDonald and Ruiters (2005); Bakker (2007); Schwartz (2008).

The debate has since moved on. In a special issue of *Water Alternatives* introduced by Ahlers et al. (2014), a collection of papers is presented showing, not only that in urban water provision both formality and informality do exist side by side, but that maintaining a distinction between the two is unhelpful. The authors suggest that practices in urban areas can be better understood if the concepts of disaggregation and co-production are used. Disaggregation is about how a single service delivery mechanism may incorporate formal or informal activities to different degrees while co-production describes a process where hybrid service provision modalities are produced as a result of the articulation of sociopolitical, economic, biophysical and infrastructural drivers (Ahlers et al., 2014).

In this paper we are interested in documenting practices relating to urban water service provision in Zimbabwe's main urban waterscape, exploring the occurrence of both informality and formality in water supply provision. A waterscape has been defined as the range of moments which are mediated by social and political processes which include physical flows, patterns of access, technologies, institutions, practices, legislative reforms, governance frameworks and discourse on water (Budds and Hinijosa, 2012). The particular trajectory of any urban waterscape depends on the nature of urbanisation in that locality. As has already been observed, African urban areas present unique challenges (Freire et al., 2014). First, African urbanisation is characterised by lower levels of income growth, and therefore lacks solid economic foundations. Second, there is a low capital investment in physical infrastructure and human capital. Third, most growth comes from slums, which require basic services. This does not bode well for provision of adequate water supply.

As will be shown below, Harare exhibits most of these characteristics. We sketch out below practices involving domestic water in Harare and analyse the phenomenon of bulk water suppliers as an alternative form of privatisation. We retain the use of the word *privatisation* because it has been and continues to be a powerful narrative in Harare. We also use it because the definition of privatisation should not be confined to the divestiture or outright sale of state assets but should be widened to refer

to non-state actor involvement in water delivery, including non-governmental organisations (NGOs) and community organisations (McDonald and Ruiters, 2005). In other words, while in general terms water privatisation is perceived to broadly imply a sale (transfer) of state-owned resources or enterprises to the private sector, characterised by the application of marketisation (Ramanadham, 1991), it may or may not entail a complete shift towards private ownership of public assets or transfer of public sector assets to the private sector (Savas, 1982; Ramanadham, 1991).

APPROACH AND METHODOLOGY OF THE STUDY

To address the question of spontaneous entry and perseverance of bulk water suppliers, this paper first reviews conditions that prevailed leading to water suppliers' emergence in 2005 and their perseverance up to 2013 when they were legalised. In doing so, it reviews main sources of water for Harare, topographic and hydrogeological issues and efforts to reform Harare's water supply and management. It then analyses the relevant legal framework and compliance issues when bulk water suppliers started and continued to operate. This is followed by a case study of the performance of bulk water suppliers in Harare.

The investigation on the role played by bulk water suppliers in the City of Harare was discovered more or less by accident during a research project on the impacts of water shortage in urban areas in Zimbabwe in which the first author was the principal investigator and worked with a number of undergraduate and graduate students. The initial interest was to assess how households were affected by water shortage (Chioreso, 2008) and the potability of alternative water sources (Chigomamarwa, 2011). This was later expanded to study the human right to water (Madaka 2012), the legal framework under which bulk water suppliers operated (Mlambo 2011), and prospects of social action in the provision of domestic water (Mangwanya, 2011).

The empirical evidence presented in this paper in the form of a case study, built upon the earlier work and was undertaken by another MSc student (Mudenda, 2013). This study was conducted between July and December 2013 in the northern up-market suburbs of Harare where bulk water suppliers were known to operate. Three suburbs (Mount Pleasant, Pomona and Greystone Park) were selected for the study. Mount Pleasant and Pomona represented suburbs where some of the residents had resorted to bulk water suppliers because there has not been tap water from the City of Harare for years. Greystone Park represented suburbs where topography was responsible for the low pressure of municipal water whenever the water became available to residents. The suburb did not receive municipal water since 2008. In addition the hydrogeology of the suburb makes it not worthwhile to drill boreholes, forcing the area to entirely depend on bulk water suppliers.

Interviews were conducted to capture the views and experiences of water users and the different water companies. These included representatives of three water companies, namely Highmel Water Deliveries, Water.com and a company without a specific name. Purposive selection was used to select respondents from households as well as private water suppliers. In the household survey, only respondents who purchased water from private bulk water companies were targeted. Snowballing or referral sampling was used to identify prospective respondents as the sample population was not known (Patton, 1990). Altogether 67 respondents from different households were selected. Most of the respondents (about 80%) were from Greystone Park, because of the heavy reliance/dependence on the bulk water suppliers for domestic water.

Representatives of public institutions, with a role to play in Harare's water supply and management system, were interviewed, which included officials from the Ministry of Environment, Water and Climate, Ministry of Local Government and Urban Development, City of Harare's Water Department and the Zimbabwe National Water Authority (ZINWA), the parastatal responsible for planning, development and supply of raw water in the country. The Harare Residents Trust, a pressure group

representing views of Harare residents, was also interviewed. The University of Zimbabwe's Department of Works represented views of a large institutional client.

An assessment of the policy was undertaken as well as the challenges faced by the enforcers of policy such as ZINWA and the City of Harare. This was complemented by observations focused on the state of the business premises of water companies and the source of the water they sold to residents. Observations at the two farms in Borrowdale Brooke, where most water companies bought water, focused on the source of water, facilities used to store borehole water before transfer to water trucks, and handling procedures involved in transferring water from the pipes into the tanks or tanker trucks, which were undertaken.

THE STUDY AREA: HARARE – A CONUNDRUM OF PHYSICAL ENVIRONMENT, NATIONAL POLITICS, AND URBAN GOVERNANCE

A hydraulic mission

Ever since Harare (then called Salisbury) was founded in 1890, its development was shaped by national-level politics, urban governance and the physical environment. Primarily the city was founded as a white settlement motivated by the desire to ensure that the living standards of the white settlers in the colonies was comparable to those obtaining in the home countries. Its specific location in the Kopje area was determined by availability of water from the nearby Mukuvisi River, ahead of the Mt Hampden site where there was no nearby surface water body (Musemwa, 2010). This explains why, over the years, efforts have been made to secure water supply for the city, which entailed building the following dams/lakes; Cleveland in 1913, Prince Edward in 1928, Chivero in 1952 and Manyame in 1976 (Musemwa, 2010). Lakes Chivero and Manyame are the city's main water supply (Nhapi et al., 2006). Water is pumped from Morton Jaffray water-treatment plant located 40 km from Harare just downstream of Lake Chivero and is delivered using distribution reservoirs in Harare, Ruwa, Norton, Chitungwiza and Epworth (the last four are satellite towns of Harare). Over the years the main challenge of the municipal water supply system has been poor maintenance of the pumping and distribution system and unchecked water pollution of the main source of water, Lake Chivero. This has resulted in serious water shortage (see below).

Failure to implement water supply plans

The failure by central and local governments to raise the required financial resources for new infrastructure, as well as maintain and rehabilitate existing ageing infrastructure, has continued to be a problem that affects implementation of plans at hand. At independence in 1980 the post-colonial government inherited a fairly functional urban water supply system. Musemwa (2010) explains that for two decades after independence, the post-colonial government focused on rural water development at the expense of urban areas because of the need to correct the urban bias of the colonial administrations as well as promote its political base. Harare's water infrastructure has not been upgraded or expanded since 1994 despite the growth of the city's population from 200,000 in 1980 to over two million in 2015, and the existence of plans to construct three new dams. The effects of not upgrading the city's water infrastructure, (which also services the neighbouring towns of Chitungwiza, Norton, Ruwa and Epworth), failure to construct three dams; Kunzvi and Musami (with capacities of 250

Figure 1. Location of Harare in Zimbabwe and Africa.



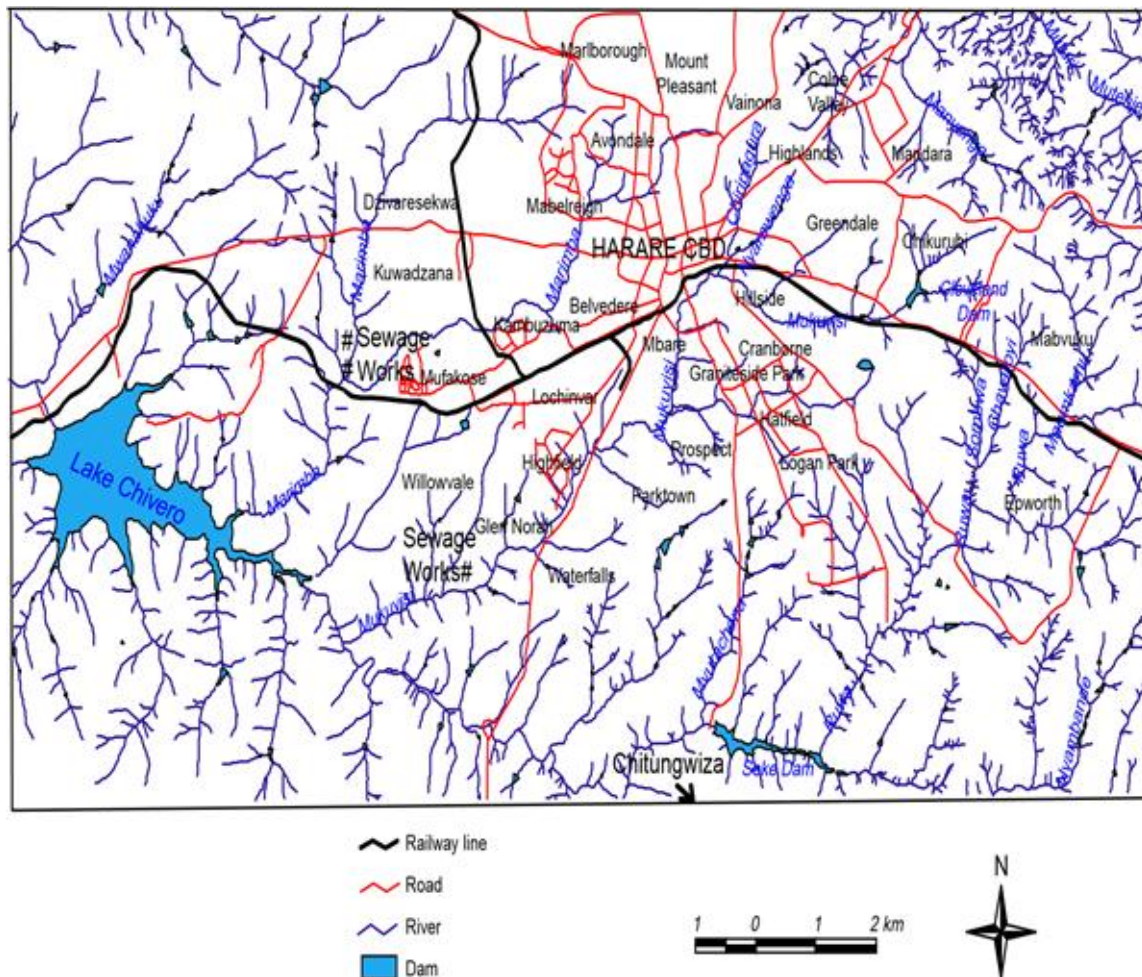
Source: Nhapi (2009).

and 450 megalitres/day, respectively²) to supply Harare, and Muda to supply Chitungwiza (Herald 13th September 2015), and failure to reduce the pollution of Lake Chivero, began to be felt in the early 2000s. This was worsened by operational challenges that included erratic electricity supply and high water treatment costs caused by widespread pollution of water bodies (Nhapi, 2009). As a consequence, water demand outstripped supply to a point where the pumping capacity of the city's water supplies of 450 megalitres per day can only satisfy 40% of the city's population.³ Suburbs on higher ground, such as Mabvuku (see Figure 2) suffered the most and went for over 5 years without water. Poor governance was also a strong contributory factor (see Musemwa, 2010).

² This is despite the fact that water demand was projected to outstrip supply in 2002 and Kunzvi and Musami dams were supposed to be commissioned in 2002 and 2008, respectively.

³ The Herald, 13th September 2015.

Figure 2. Suburbs of Harare and the main neighbouring towns.



Source: Nhapi (2009).

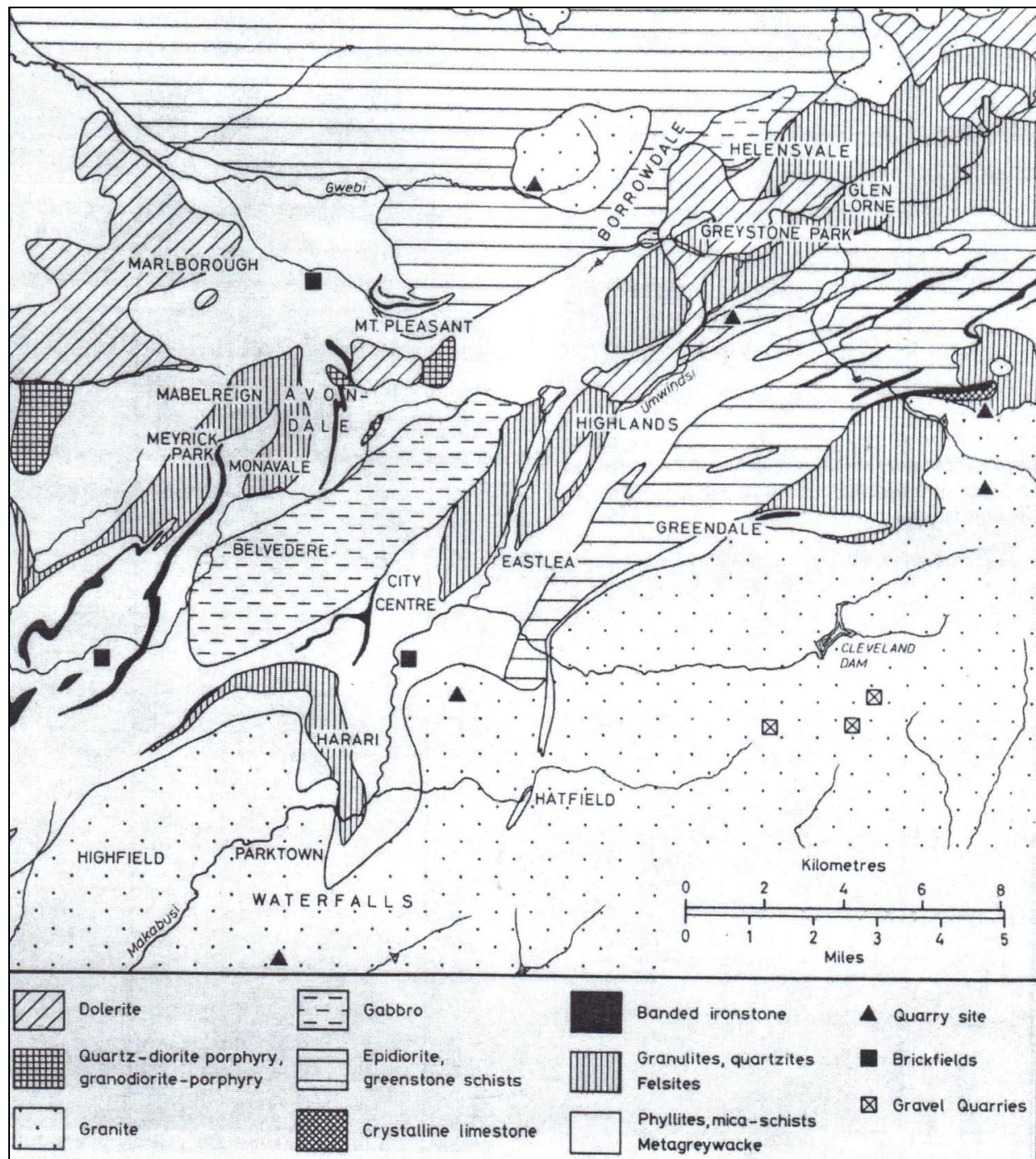
Self-supply efforts

Faced with water shortage, Harare residents resorted to self-supply as has been reported in other countries (Butterworth et al., 2013; McCarthy et al., 2013). Manzungu and Chioreso (2012) report of Harare residents storing water in tanks, practising water conservation, drilling boreholes and digging shallow wells. As a result, groundwater has become an important source of water in the city where private boreholes in northern suburbs, and industrial areas and communal boreholes and wells in high density suburbs are used to supplement municipal water supply or provide domestic water to sprouting suburbs, not yet connected to municipal water.

Geographical and hydrogeological issues affecting water supply in parts of Harare

The combination of topography and hydrogeology makes supply of municipal water and drilling of boreholes in some areas difficult, forcing households in such areas to resort to bulk water suppliers. This is because Harare is located on a plateau, 1400 m high with some parts being hilly. Such is the case with suburbs like Glen Lorne, Kambanje, Greystone Park, Helensvale, Borrowdale Brooke, Shawasha Hills and Glen Forest (not shown on Figure 2 but located north of Mandara and Highlands), which are on high ground characterised by resistant and low-yielding bedrock from granulites, quartzites and felsites, which is quite extensive in the northern suburbs where bulk suppliers mostly operate (Figure 3).

Figure 3. Geology of some Harare suburbs.



Droughts tend to worsen the situation. In elevated parts of Greendale, Highlands, Newlands, and parts of Borrowdale, Pomona, Vainona, Mount Pleasant and Emerald Hills boreholes dry up (Broderick 2012). The situation is worsened by unregulated drilling of private boreholes, especially after year 2005 when municipal water shortage began to be a common phenomenon throughout the city.

Efforts to reform Harare's water supply and management

The story of water crisis in Harare is not complete without mentioning the political manoeuvrings that occurred at Town House. As can be seen from Table 2, the central government was not comfortable with the opposition party running the city. Since the late 1990s government-run commissions, elected councils and the national water parastatal took turns to solve the water supply crisis with little or no success.

Table 2. Major governance events in Harare during the post-colonial period.

Year/Period	Major events
1980-1995	Run by ruling party-controlled municipality which enjoyed a good relationship with the central government
1999-2002	Run by a government-appointed commission (Chanakira Commission)
2002	Opposition party wins control of municipality but its operations are hindered by the central government
2002-2005	Popularly elected mayor and council are dismissed. Harare is run by a government-appointed commission (Makwavarara Commission)
2005-2009	Water supply and sanitation are transferred to the national parastatal, Zimbabwe National Water Authority (ZINWA)
2009	Water supply is returned to the City of Harare
2009-2013	City run by elected Council. Government secures a USD144 million loan from the Chinese.
2013	Opposition party wins control of the council Government approves the National Water Policy which suggests overhaul of water supply management

Source: Various

From the late 1990s into the mid-2000s, the twin approach of state-led investment in improving water infrastructure and institutional reform was considered along with the option of privatising water supply. These did not materialise. Water privatisation failed because of political and economic crises (Mate, 2005). The state-led investment plan, which was bankrolled by the African Development Bank (ADB), and proposed by the German engineering company (GKW) revolved around corporatising the city's water and sanitation services and expanding supply through construction of the Kunzvi Dam under the Build, Own, Operate and Transfer (BOOT) arrangement. The plan failed amid claims by Harare City Council that the company did not have appropriate engineering credentials to see through construction of Kunzvi Dam and that there had been a breach of tender procedures. Mate (2005) reports similar efforts by the European Investment Bank (EIB) to finance water reforms through system rehabilitation and capacity building of personnel. This also failed because the government spurned stringent conditionalities to ring-fence income from water through a proposed stand-alone company and prioritisation of rehabilitation of the existing water supply system, ahead of building the Kunzvi water supply system which was the Council's priority. Nhapi (2009) points out that Kunzvi Dam's 100 megalitre/day water supply capacity would barely cover the water losses of over 30% incurred by Harare's water distribution system. Furthermore, the author suggests that with a 1400 megalitre water abstraction capacity projected for 2015, and a combined capacity of the Chibero/Manyame dams of 727,417,000 m³, the current water supply for Harare would be adequate if pumping and water production infrastructure was rehabilitated. It has also been suggested that the Council's failure to produce audited financial statements since the 1990s and strict tariff controls by the government were

disincentives to investors (Nhapi, 2009). We argue that while this could be true the major factors lay in the political domain.

After failing to get both international and local investors, the government unexpectedly transferred water and sanitation services responsibilities from all urban authorities, including Harare, to ZINWA in 2005 (ADB 2010). This transfer occurred despite ZINWA's lack of experience in managing water supply for a large city like Harare and amid suppression of the tariffs by the government to cushion poor urbanites (Nhapi, 2009). There was no adequate preparation for ZINWA's takeover (ADB 2010) which occurred under a debilitating economic crisis. The responsibility was returned to Harare City Council in 2009 when the situation did not improve under ZINWA.

Meanwhile the government continued to interfere in the running of the city in general and water supply in particular. For example, the government negotiated a loan of USD144 million with the Chinese government to upgrade the Morton Jaffrey water works without the involvement of the City Council. No real improvement was felt which was worsened by allegations of corruption around procurement.

The above documented failure by the City to provide enough water provided a window of opportunity for bulk water suppliers to enter the market. This is the subject of discussion in the remainder of this paper.

REVIEW OF REGULATORY FRAMEWORK GOVERNING BULK WATER SUPPLIERS IN URBAN AREAS

The operations of bulk water suppliers cannot be adequately understood without providing an overview of the regulatory framework in terms of the policy and legal provisions governing water resources management (quantity and quality) and water supply and sanitation.⁴ It is, however, worth noting that the regulatory framework preceded the operations of bulk water suppliers, and the transfer of water supply and sanitation to ZINWA. Thus the 2013 regulations that gave legal effect to the operations of bulk water suppliers were nested within the wider regulatory framework.

General regulatory framework

The provision of domestic water in urban areas is subject to the general regulations governing water supply in urban areas, which are made up of two dimensions; the legal instruments dealing with the *water resource* and those dealing with *water supply* in terms of how the raw water is treated and delivered to households.⁵ Urban domestic water supply is governed by three main Acts dealing with raw water; the Water Act (Chapter 20: 24) (Zimbabwe, 1998a), Zimbabwe National Water Authority Act (Zimbabwe, 1998b) and the Environmental Management Act (Zimbabwe 2002)⁶ and three Acts dealing with potable water supply; the Urban Councils Act (Zimbabwe, 1996), the revised Public Health Act of 1996 (Zimbabwe, 1978) and Food and Food Standards Act Chapter 15: 04 of 1996 (Zimbabwe, 2001).

The Water Act provides for the overall management of water resources while the Zimbabwe National Water Authority Act established the ZINWA which is responsible for planning, development and management of water resources. Traditionally, ZINWA (except between 2005 and 2009 when urban water supply and sanitation were transferred to it) performs the following functions:

- Provides bulk raw water supply from state dams to major clients like urban councils,⁷ which are then responsible for producing and distributing potable water to their clients.

⁴ In this paper the latter is, however, more relevant since operations of bulk suppliers have been subject to labels of illegality.

⁵ The description of the regulatory framework that is provided below pertains to the post-independent era.

⁶ The Environmental Management Act protects water resources through water quality enforcement (Zimbabwe, 2002).

⁷ Urban councils do not pay for raw water if they are drawing water from dams that they constructed with their own funds.

- Provides potable water services to small urban centres and rural centres including government institutions, which do not have the capacity to run their own water supply systems for their clients.
- Provides technical expertise to catchment and sub-catchment councils,⁸ which are mandated to allocate and manage water on a day-to-day basis and issue abstraction permits to private borehole users who wish to drill their own boreholes in line with provisions of Section 35 of the Water Act.

Potable water supply in urban centres is governed by the Urban Councils Act as reported above (see Madaka, 2012 for more details). In terms of section 183(1) of the Urban Councils Act, a Council may provide and maintain a supply of water and may take necessary measures for the purpose of providing and maintaining a supply of water. Section 184(1) provides that a Council may require an owner of premises to connect his/her premises to a system of water supply for drinking, domestic and sanitation purposes. Section 187 grants power to Urban Councils to establish, by way of resolution, a scheme for rationing or restricted use of water in the case of an emergency. The same section authorises urban councils to install meters to determine the quantity of water consumed by individual occupants of any building or group of buildings. The Urban Councils Act recognises Councils (and not bulk water suppliers) as having the mandate to supply potable water to their residents. Neither the water law nor the urban council's act and statutory instruments derived from them provided for bulk water supply by tankers or any other institutions except when it was delegated to ZINWA between 2005 and 2009. Furthermore, abstraction of water from private domestic boreholes for commercialisation of water supply was forbidden by the water law and it could have been enforced, where illegal abstractions occurred, but was not. The Public Health Act Chapter 15: 09 of 1996 and Food and Food Standards Act Chapter 15: 04 of 1996 govern health-related aspects of provision of bottled water to the public and delegate responsibility to local councils. As an example, section 64 of the Public Health Act provides for the duties of the local authority to inspect and test water supplies so as to ensure provision of wholesome water for drinking and domestic purposes, and to maintain and secure water sources. Waterworks have to be approved by the state before they commence operations. Like others, this Act did not recognise bulk water suppliers as water suppliers and it was not enforced on them.

The section above has described the water legislation as it is currently constituted. There were also efforts to review the water legislation for two main reasons. First, Zimbabwe adopted a new constitution in 2013 (Zimbabwe, 2013a). Chapter 4: 34a of the new Constitution states that, "every person has the right to safe, clean and potable water...and the state must take reasonable legislative and other measures within the limits of the resources available, to achieve the progressive realisation of this right" (Zimbabwe, 2013a). Without a change in the current water law and the urban council's act, these constitutional provisions cannot be met. Second, in 2013, the country also adopted a new water policy, which has a number of provisions that require the water law and urban councils act to be changed. The policy contains elements of water privatisation as described below.

The National Water Policy proposes a suite of water decentralisation models for urban areas as well as wide ranging neo-liberal reform strategies that emphasise market liberalisation and privatisation. Urban local authorities are designated as Water Services Authorities with a mandate to ensure efficient, affordable and sustainable access to water services for all their current and potential consumers (GOZ, 2013: 28): Section 7.4.2 of the National Water Policy states that

Urban Local Authorities are responsible for ensuring the welfare of urban residents through the provision of efficient and affordable water supply and sanitation services. (...) a distinction is made between the

⁸ On the basis of hydrological boundaries, Zimbabwe was divided into seven catchment areas (presided over by catchment councils) under which are found a number of sub-catchment areas over which sub-catchment councils preside.

responsibility of urban authorities to ensure that services are provided and the actual operation of services which may be more efficiently undertaken by a dedicated service provider as a function delegated by the local authority.

Therefore, as a local authority, Harare City can designate Water Services Providers with a legal mandate to provide water on behalf of the authority. A service provider may be public, private or mixed entities, National Water Supply Service Utility (NWSSU), a private-sector company or any other legal entity" (GOZ, 2013). Mixed entities referred to in the policy imply the formation of Private and Public Partnerships (PPP). While bulk water suppliers predated the constitution and the National Water Policy, they are not mentioned in the policy document but are provided for in specific regulations (see below).

In Zimbabwe, commercialisation, as a halfway house towards privatisation, has been tried in many sectors such as cotton, dairy, telecommunications and national parks, to mention but a few. In the water sector, the formation of ZINWA was motivated by the desire to commercialise water resources management while Harare Water was to be a vehicle for commercialising water supply. More recently, commercialisation/ privatisation of water supply has been grabbing more attention than commercialising/ privatising water resources management. The National Water Policy (2013) states that financial revenues from water supply must be ring-fenced to avoid misallocation of water revenues to other council services not related to water (GOZ, 2013). Despite this pronouncement, water revenues have not been ring-fenced and services have continued to plummet. Instead, it is the bulk water suppliers who have invested in making water available to parts of Harare that have been neglected by the Harare City Council.

Specific regulations governing private bulk water suppliers

As already stated, private bulk water suppliers started operating from 2005 without any regulation specific to water, the same year when ZINWA took over the management of water supply and sanitation in cities (however, this seems to be a coincidence more than anything else). They were registered as companies under the Companies Act (Chapter 24: 03). As already said regulations governing bulk water suppliers were promulgated in 2013, close to a decade later. Prior to the 2013 regulations, bulk water suppliers were labelled illegal but continued to operate. This was because they filled a void of water supply shortage in the eastern and northern suburbs of Harare, where water supply was erratic and not available in some cases. They provided water to a variety of users and uses: domestic water for individual households and institutions; people involved in construction; and those wishing to fill their swimming pools. As reported later on in the paper, there was a thin line between what were 'legal' and 'illegal' and 'informal' and 'formal' (see Ahlers et al., 2014).

The authorities had to play catch up with the operations of bulk water suppliers. A statutory instrument that recognised and regulated bulk water companies as providers of water services was sponsored by the Minister of Water Resources Development and Management after consultation with ZINWA and gazetted on 21 June 2013 (Zimbabwe, 2013b). Statutory Instrument 90 of 2013 (Chapter 20: 25) spelled out registration requirements of bulk water companies. ZINWA is the designated regulatory authority. The instrument allows any person to sell bulk water as long as he or she meets the criteria and detailed guidelines and requirements needed for registration. Annual registration of bulk water selling cost USD250 and late registration attracts a penalty of USD500.

Private Bulk Water Companies (PBWCs) are defined as "persons who sell water in bulk for any purpose exceeding 2000 litres and includes water bottling companies" while a bulk water supplier is defined as a person or company that is involved in selling or conveying potable water for sale for domestic purposes (Zimbabwe, 2013b). The bulk water companies, as any other water user, pay a quarterly subscription fee to their respective sub-catchment council. Sub-catchment councils are mandated to manage and monitor water resources as well as resolve conflicts.

ZINWA is authorised under this statutory instrument to carry out spontaneous inspections on the company premises, trucks in transit and pumped borehole water any time they deem necessary. The Instrument also defines the boundaries where water for purposes of selling must be abstracted by stating that "No person, company or organisation shall abstract groundwater from boreholes or wells for the purpose of supplying water in bulk, in residential areas within the boundaries of an urban authority unless the person, company or organisation proves to the Authority that such abstraction does not interfere in any way with boreholes or wells on neighbouring properties". Bulk water companies are supposed to submit every two weeks, reports and information of the following:

- Water quality (chemical and bacteriological).
- Groundwater levels recorded by use of an electric deep meter.
- Abstraction volumes recorded by a meter approved by the Authority and permanently installed on the borehole.

Boreholes drilled for the purposes of selling water must adhere to the standards set by the Standards Association of Zimbabwe (SAZ). These requirements are meant to ensure that the quality of water is safe for consumption, the quantities of water drawn are paid for in full and the groundwater level is kept in check for the benefit of other users including the environment.

The Instrument also spells penalties for non-compliance which include paying a fine, imprisonment for at most six months and seizure of water sold and vehicle when it says

(2) Any person who contravenes subsection (1) shall be guilty of an offence and liable to fine not exceeding level eight or imprisonment for a period not exceeding six months or both such fine and such imprisonment (Zimbabwe, 2013b).

(3) In addition, any water being sold in bulk, in contravention of this section, shall be liable to seizure in accordance with subsection 5 (Zimbabwe, 2013b).

The City of Harare's Health Department also came up with guidelines that were adopted word for word from Manitoba Health Unit, Guideline #13-01 (Manitoba Health Unit, 2013). Bulk water suppliers need to obtain a health registration certificate and be able to operate according to the bye-laws of the City. The guidelines are meant to ensure hygienic standards are maintained to protect the general public from waterborne diseases, which frequently break out in the city. The regulations refer to the following provisions:

- Urban Councils Act Chapter 29: 15 Section 219.
- Public Health Act of 1996.
- Food and Food Standards Act Chapter 15: 04 Of 1996.
- Harare Food Hygiene By-Laws, Section 8 k (II) which state that "(the public should) not place any food lower than 500 millimetres from the ground on any pavement or in or about any forecourt or yard... ensure that open food, while displayed or exposed for sale or during delivery, is kept covered or is otherwise effectively screened so as to prevent any infection or contamination".

Bulk water companies are required to go through a series of clearances from various institutions before being awarded the health registration certificates. For instance, for one to successfully lodge an application of registration of an abstraction point, one should demonstrate that one is in compliant with the requirements of ZINWA, Harare Water, and Urban Planning, produces a receipt of payment of the administration fee (USD60) from the City Health Department, and completes an application form from the City Health Department.

In addition to the above, the company has to meet the cost for chemical and microbiological water analysis. Inspection of the site is conducted by the City Health Department before the company is

issued with the registration certificate. The health registration certificate for the source costs USD400 while another one costs USD200 for registering each vehicle. The certificate expires on the 31st of December of each year and has to be renewed annually. The City of Harare's guidelines also gives a list of requirements and standards that should be met at the source/premises where water is abstracted. In addition, the source shall be connected to a chlorination machine for online chlorination to ensure quality water.

Further, the guidelines specify the type of vehicle and water tanks that should be used for the purposes of carrying potable water and these are subject to approval by the City. The appropriate operational measures that must be undertaken to protect the water and its source, the storage tank and all other equipment from contamination during filling, storage, transportation and delivery, are also spelt out. For instance, tanks must be sanitised at least three times per year. A failed bacteriological water analysis must be immediately followed by sanitisation. For quality control, the City Health Department is mandated to conduct routine monitoring and random sampling of the water in the bulk water tanks for analysis.

OPERATIONS OF BULK WATER SUPPLIERS IN THE CITY OF HARARE

This section describes the operations of bulk water suppliers that service Harare. The information presented here is largely based on fieldwork carried out by Margret Mudenda for her MSc thesis research in 2013 (Mudenda, 2013).

Bulk water suppliers operated from premises close to their clients, namely households in high income suburbs. Along the Harare Drive in Pomona, four different companies rent premises, namely Highmel Water deliveries, Water.Com, Orca Waters and another one with no specific name but with only the word Water written. Some bulk water suppliers served institutional customers (which included the University of Zimbabwe), NGOs and the corporate world. Water.Com indicated that most of its customers were from the corporate world. The suppliers committed substantial investment. For example, a single water tanker costs at least USD100, 000. No exact number of tankers is known but at least tens of them ply their trade in the city every day.

Since the start of their operations in 2005, bulk water suppliers have gained popularity. As already said this is because a) not all households can afford to drill their own boreholes in the face of shortages of municipal water, b) bulk water suppliers are a cheaper option – drilling a private borehole can cost as much as USD6000, c) water purchases supplement water obtained from municipal taps or from boreholes that run dry because of too much abstraction in the area, and d) topography and geology make it impossible to drill boreholes in some areas.

Bulk suppliers rely on a number of water sources. Apart from the two farms located in Borrowdale Brooke, some bulk water suppliers used to get water from boreholes located within the environs of Harare. This abstraction of water from boreholes has since been banned. Presently, some get water from boreholes outside the City of Harare, as far as Domboshava, a neighbouring rural area located about 30 km north of Harare. For example, Highmel Water Delivery Company owns some boreholes in Domboshava.

Profile of clients of bulk water suppliers

In general the clients of bulk water suppliers were relatively well off compared to the rest of the population – they lived in affluent suburbs where houses commanded a market value of at least USD300,000. Most of the households interviewed (about 73%) earned an average of more than USD1,000 per month. Household income was generated from good jobs and proceeds from businesses. For this category of clients the price of water was not an issue. Households with an average income of between USD700-USD1000 per month, which constituted 13.4% of the sample, controlled the amount

of money they spent on water by restricting the purchase of water. A further 13.5% of the households that had an average income of less than USD700 per month, comprised pensioners and some senior civil servants who supplement their incomes with remittances from their children. These regarded the water as expensive and therefore cut out such luxuries as gardening.

Water use

Most respondents got their water for domestic purposes from private bulk water companies. Out of the 67 respondents, 82% relied on them for domestic water while 17% relied on private boreholes. Only 1% used a protected well as a source of water. None of the respondent mentioned municipal water as a source of water.

Water bought from bulk water companies is used for different purposes. The main uses included bathing and washing. Only 12% of respondents used water for gardening with other respondents not using water at all for gardening because of the expenses involved. As low as 4% of respondents used water for filling up swimming pools, building and poultry projects. Most households, (97%) cannot afford such luxurious spending on water and prefer to stick to basic domestic use like washing, cooking and bathing.

Close to half of the households (42%) indicated that they relied on a single supplier while 34% had purchased water from two different companies. Some households use more than two companies because of bad experiences or when the supplier of the first choice is fully booked. A working relationship has been established between the companies and their customers. Well over half of the respondents (61%) rated the overall performance of suppliers as good, based on responsiveness of the suppliers relating to issues to do with, and quantity of, water. About a fifth (22%) of the households rated the service as very good while 16% rated the service as fair.

The data collected show that not all households purchased adequate quantities of water for domestic use. About a third of the respondents (34%) did not purchase the amount of water that met their needs. Such households resorted to conserving or recycling water. Some gardens and lawns are no longer being attended to due to limited water resources. Some households, due to their sizes, cannot buy adequate water to meet their requirements and have resorted to conserving water.

Out of 67 respondents 60% rated the water to be of good quality while 15% rated it as fair and 25% as very good. Good quality does not necessarily mean potability of water; it referred to physical appearance of water. Some residents who would have relied on the same supplier for five years tended to trust the quality of the water. Respondents who rated water quality as fair had had bad experiences. Three respondents reported that they changed suppliers because of bad smell and the presence of green algae or sediments. The Director of Harare Residents Trust, a local NGO that campaigns for residents' right to water, also confirmed receiving reports of poor-quality water. Water suppliers acknowledged that they received complaints about quality of the water. Some suppliers blamed some customers for not sanitising their tanks.

Out of the 64 persons who relied on bulk water companies for domestic water, only a few do some further purification of water. Only 10% of households undertook some measures to make the water safer such as boiling the water. Most of the respondents (90%) trusted their sources of water and saw no reason of treating it. Some argued that the source where the Private Bulk Companies abstracted their water is purified while others based their judgements on experience and the fact that borehole water is quality water compared to water coming from council taps. As such, the residents believed that it was safe. Since residents do not test water, it is difficult to describe authoritatively the actual state of the water quality. The experience of the University of Zimbabwe provides an insight into the quality of the water (Box 2).

Box 2. Quality of water supplied by bulk water suppliers to the University of Zimbabwe.

Water companies have been delivering water to institutions which include the University of Zimbabwe, NGOs and the corporate world. Water.Com indicated that most of their customers come from the corporate world. The University of Zimbabwe once requested 2.5 million mega litres of water in March 2013 for which they paid USD18, 000. The water was delivered by different water companies as the quantities of water were too large for one company to supply. Tests conducted by the University of Zimbabwe's departments of Civil Engineering and Biological Sciences to ascertain the quality of water indicated high levels of bacterial counts; E.coli and Coliform were detected. The water that had been delivered to the storage tanks of the University of Zimbabwe was chlorinated by the Harare City Council to make it potable.

Source: Mudenda (2013).

To ensure water quality, some borehole owners who are into the business of selling water to suppliers installed purification plants and on-line sterilisation machinery. This was the case at Rehoboth Farm where suppliers like Water.com buy their water for reselling. However, at Munda Musasa Farm in Borrowdale Brooke, from where most of the water companies purchase their water, there were no such purification facilities. The water sources are in the open, rendering them susceptible to dust contamination. Handling process is also poor. The drainage system was also poor as illustrated by ponds of stagnant muddy water.

Unlike water quality, the quantity of water delivered did not attract as many complaints, as suppliers simply transferred the water into the tanks at the households. Residents only needed to check that their 5000 litre-tanks were filled to the brim. As many as 91% of respondents confirmed they received the right quantity of water. Only six of the respondents said the quantities may sometimes be less than requested.

Price of water

Suppliers charged a minimum of USD40 and a maximum of USD75 per 5000 litres depending on the company. The location of the customer in relation to the water source determined the price of water: households close to the source were charged the lowest price of USD40. This is equivalent to USD8,000 -15,000/Megalitres (ML). As can be seen from Table 3, the price is much higher than the cost of raw water charged by ZINWA for all categories of water. Clear water costs USD0.4 m³ and USD1.29/m³ for the most conservative and heavy domestic water users, respectively. Therefore, even when comparing with the heaviest domestic user in the affluent suburbs, the cost of bulk water is six times higher.

Bulk water suppliers used a number of reasons to justify the price they charged. They claimed they incurred a lot of costs in acquiring vehicles and tankers, paying drivers and transporting water over great distances especially now that they were instructed by ZINWA to abstract water outside the residential areas. For example, Highmel used to charge USD30 per 5000 litres in 2005 when the business started. The price has risen to USD60 because water was now being ferried from boreholes in Domboshava. Another source of the costs related to acquisition of permits and registration papers that were charged by different institutions. According to the chairperson of the Association, the 'water business' was capital-intensive and hence the need to charge high prices in order for them to break even.⁹ There was, however, an acknowledgement that the water price could not be afforded by all Harare residents, hence the focus on those households that could afford the price. The proportion of household income spent on water could not be established. However from literature, water service is

⁹ Interview with Private Bulk Water Companies Chairperson, 28 October 2013, Borrowdale Suburb, Harare.

affordable when it is not more than 2% of the average family income (Misiunas 2005), and should not go beyond 5% (Prasad 2006).

Table 3. ZINWA Water Tariffs (USD) for various types of water.*

Block quantity	Low income areas (USD)	High income areas (USD)
<i>Clear water (per month)</i>		
Fixed charge	7	7
0-10/m ³ /household	0.40/m ³	0.80 /m ³
11-20/m ³ /household	0.96/m ³	0.96/m ³
21-30/m ³ /household	1.04/m ³	1.04/m ³
31-40/m ³ /household	1.12/m ³	1.12/m ³
41-50/m ³ /household	1.21/m ³	1.21/m ³
Over 50m ³	1.29/m ³	1.29/m ³
<i>Raw water</i>		
Industry	13.17/ML	
Commercial Agriculture	12.68/ML	
Urban	11.71/ML	
A1 Farmers	7.80/ML	
Communal	5.00/ML	

Source: Adopted from Murungweni (2011).

* The price of clear water remained the same when Harare City Council took from ZINWA.

Fighting for survival

Since they started operations in 2005 until 2103 when regulations came into effect, bulk water suppliers were vilified by various arms of the state for operating 'illegally', without any action being taken because of bulk suppliers had become indispensable to Harare's urban waterscape. On their part, bulk suppliers coped with the situation by keeping a low profile. Problems were compounded when some residents complained of their boreholes drying up. In Pomona, one company was told to stop operations. This also explains why they are now required to collect water outside the city. Realising their precarious position, bulk suppliers formed an association. As of 2014 the number of bulk suppliers stood at around 46 of whom 26 formed an association. A monthly contribution of USD50 is collected from each operator. Information is limited regarding how the association operates.¹⁰

Bulk water suppliers complain bitterly about the new regulations and were negotiating the terms and conditions for their registration and operation. They point out that theirs is a noble cause – they provide domestic water to households that do not have access to municipal water. They pointed to 'disorganisation', referring to lack of coordination between ZINWA, Harare City Council and the Upper Manyame Sub-catchment Council, which was impeding progress. Part of the problem was the lack of appreciation of the situation on the ground. This was illustrated by the requirement that bulk suppliers should deliver potable water, which explains why they are regulated under the Food and Food Standards Act.

Suppliers were nowhere near meeting the guidelines imposed by both ZINWA and Harare City Health Department. Confronted with such onerous demands the bulk suppliers have simply ignored

¹⁰ Interview with Private Bulk Water Companies Chairperson, 28 October 2013, Borrowdale Suburb, Harare.

them. Even the less onerous demands are being ignored. The statutory instrument prohibits bulk suppliers from abstracting water from residential areas within Harare but it is being breached. Suppliers were observed abstracting water from boreholes in their work premises in Borrowdale suburb. They admitted to contravening the law, and argued that they were trying to cut transport costs, which also help in reducing the price of water.¹¹

The bulk suppliers do not want to be seen as gold-diggers. They see themselves as providing a much needed service to households that have been 'abandoned' by the City regarding water services. But this is not always appreciated by some residents as illustrated by a story that appeared in the local press. The story headlined, "Old water woes, new water", reports of residents of Greendale suburb, whose boreholes were drying out because of the activities of LS Water, which was accused not just by residents but by Upper Manyame Sub-catchment Council.¹² It was alleged that the company was abstracting between 180,000 and 300,000 litres per day, which was between 4-7 times their allocation of 41,000 litres per day. The Sub-catchment Council had filed a complaint with the Rhodesville Police station. It was still to be acted on. To residents, the fact that LS Waters could defy the Sub-catchment Council was proof that the proprietor had "some people in his pocket because he has not stopped in spite of complaints furnished to the authorities against his operations since 2009".¹³

Prospects for effective implementation of these regulations are slim, not least because of the institutional layers involved. Since Upper Manyame Sub-catchment Council, ZINWA and Harare City Council are all involved, it means it is very possible for bulk water suppliers to get away with it, and they have been doing so and are likely to continue doing so. While ZINWA is mandated by the Statutory Instrument to register, regulate and de-register noncompliant water companies, to date it has only registered four bulk water companies two months after the expiry of the registration. The Harare City Council has only managed to organise a single meeting in July 2013 to explain its guidelines and it claimed to be in the process of "identifying the water companies".¹⁴ No follow-up was made on the issues discussed. The majority of the bulk suppliers are operating without registration. Neither ZINWA nor the City Health Department has conducted inspection of the premises and random sampling of the water at the source or in the tanker trunks. Logistical reasons were said to be preventing ZINWA from conducting inspections and random sampling. Members of the Council staff were still in the process of identifying the water companies. The chairperson¹⁵ claims that noncompliance is a result of a lot of demands that have been placed upon the suppliers. There was agreement among the suppliers that the registration fees were too high, which ignored the fact that suppliers absorb many other costs as the industry is capital-intensive. According to the chairperson, none of the companies have been arrested, fined or had their vehicles seized. More recently, however, ZINWA seems to be taking action. On its website is a story claiming that 10 companies and one individual had been arrested in November 2015 for offences that include pumping water from a stream without a permit, selling water from an illegal borehole, transporting bulk water without a license, pumping water from unauthorised sources and transporting water using unregulated trucks.¹⁶ Interestingly, the companies were not ordered to stop operating but to regularise their operations.

¹¹ Interview with Private Bulk Water Companies Chairperson, 28 October 2013, Borrowdale Suburb, Harare.

¹² The Herald, 24 July 2014.

¹³ Ibid.

¹⁴ Key Informant interview from Council, 18 October 2013, City of Harare Water Department.

¹⁵ Interview on 28 October 2013, Borrowdale, Harare.

¹⁶ www.zinwa.co.zw/operation-to-stop-illegal-bulk-water-trade/ (Accessed 15 December 2015).

DISCUSSION AND CONCLUSIONS

Several factors combined to give birth to the spontaneous emergency and survival of bulk water suppliers between 2005 and 2013. Government's focus on improving water supply and sanitation in rural areas since the 1980s, and the failure of the IMF/World Bank-funded structural adjustment programme, starved government of funds to upgrade water supply infrastructure and reform water supply and management in Harare. Compounding this was the failure of state-led Government efforts to mobilise international financing coupled with Harare City Council's failure to raise local financing. This was against a backdrop of rapidly deteriorating economic conditions further compounded by urban water governance and the government's unfortunate neglect of the urban water space (Musemwa, 2010), which resulted in a deterioration of Harare's water supply infrastructure followed by severe water shortages. The lack of investment and appropriate governance resulted in a situation, where since 2001, when serious water shortages started, the City of Harare has gone through 14 years of worsening water shortages with no respite in sight. This situation forced residents to look for alternative water sources, depending on the income status. Medium- to high-income households turned to bulk water suppliers, especially where topography and hydrogeology precluded borehole drilling. This created a business opportunity for the bulk suppliers, which they seized with both hands although the legal framework has posed challenges.

Out of a number of existing laws relevant to urban water supply before the new regulations in 2013, the provision of the Water Act which outlawed commercial abstraction of water from domestic boreholes (in the absence of authority being given by the Catchment Council) was the most enforceable but this was not done because of the critical role bulk water suppliers played in filling the supply gaps of the municipal system. Thus eight-year legal hiatus (2005-2013) allowed bulk water suppliers to be part of co-producing water supply services in the city (Ahlers et al., 2014). We contend that without an explicit stated policy position, this helped the cause of bulk water suppliers, which since 2005, have emerged as alternative providers of urban domestic water to water-stressed households in Zimbabwe's largest metropolis because of failure by the municipality to provide adequate water.

It is interesting to compare the 2005-2013 period that was characterised by a spontaneous rise and continued existence and expansion of activities, and the period when the regulations were promulgated in 2013. The introduction of regulations was intended to control abstraction of groundwater, mostly in response to vociferous private borehole owners. But this was not easy because there was no good database of the number of boreholes and the quantities of water abstracted in the city, more so in the aftermath of the 2000 fast track land reform which resulted in a breakdown of the water permit system. By siding with private borehole owners the authorities put their interest above those served by bulk suppliers who would have to pay more because of higher transportation costs as briefly highlighted below.

In our view, the 2013 regulations could have been crafted so that they assist rather than frustrate the operations of the bulk suppliers. Unfortunately, this was not the case. Instead of realising that the degree to which bulk water suppliers can succeed as service providers in the urban waterscape in Zimbabwe depends on an innovative regulatory environment, the state could only muster unhelpful regulations that were not based on realities on the ground. We argue that the regulatory instrument was ill-advised because it was based on potable water-quality standards. While we appreciate the need to protect public health by insisting on high water-quality standards, we wonder whether this is the best way forward. The standards were difficult, if not impossible, to adhere to, for both financial and practical reasons. First, for many suppliers operating a few trucks, the economies of scale did not make sense. The other challenge was that re-contamination of water could occur during transportation to the respective destinations. Even if followed, these standards would push the cost of water beyond the reach of residents, which would be counterproductive to those residents who depended on bulk suppliers for their water needs. For such residents lack of access to water represented a greater risk

than what authorities regarded as dirty water which was being distributed by bulk suppliers. We are here not seeking to underplay the public health issue. Rather we are arguing that it would be better if the regulations classified bulk water companies as providers of bulk raw water (and not providers of potable water), which in fact they were. In this vein, it is worth noting that ZINWA is primarily a provider of raw water. The classification of bulk raw water would make it simple because everyone would know that they were not getting potable water. Other measures can then be put in place to make the water safe. We argue that this is preferable to the current situation with unattainable lofty standards.

Overall, it can be said that bulk water suppliers represented successful mobilisation of local (Zimbabwean) private capital into the urban domestic water sector without any assistance from the state or international resources. The capital that was invested was substantial by Zimbabwean standards. It is also remarkable that the customers were satisfied with the service they obtained, which cannot be said about the service of the City Council. Therefore, we argue that bulk water suppliers can be seen as a viable alternative endogenous form of privatisation of urban domestic water supply as contrasted to multinational companies. The word endogenous is borrowed from the well-known theory in economics which argues that growth is primarily the result of endogenous and not external forces (Romer, 1994). We are aware of the limitations of the endogenous growth theory (Pack, 1994), and therefore use it as a counterpoint to the mainstream water privatisation and do not necessarily subscribe to its theoretical claims. What is interesting to us is the possibility of local actors taking initiative and being innovative to offer local solutions to local problems. The deployment of local private capital in urban water services occurred outside the discourse around wholesale privatisation of Harare, which has been on and off the agenda since the 1900s, as well as commercialisation discussions which were tried but had failed. The story of bulk water suppliers raises the possibility of another form of privatisation of urban domestic water in Zimbabwe, an endogenous one, which may contribute to the realisation of a rights-based approach to water (UN, 2011). This is critical because water has no substitute and is directly linked to public health and environmental issues in urban areas (Prasad, 2006).

Our point is that developing countries such as Zimbabwe need not always look outside for solutions and that they should redefine the agenda. This should even include redefining certain terms, such as privatisation. To this end, we do not think that it is always necessary to adhere to the meanings that are in common currency even when they are used globally. The case of bulk water suppliers in Harare does not involve assets of Harare City Council; neither does it involve a proactive policy initiative by government. From that perspective bulk water supply in Harare does not conform to the strict definition of privatisation of the 1990s. But does this really matter? Our argument is that privatisation of water may occur by default rather than by design as was the case with bulk water suppliers. The fact that something useful occurred by default should not be a criterion of its acceptance or rejection. Its usefulness should be the guiding principle.

We conclude that bulk water suppliers can be a viable alternative form of privatisation of urban domestic water supply in Zimbabwe provided that these should be regarded as complementing rather than replacing functional urban water supply systems. The focus on bulk water suppliers in Zimbabwe should, however, not be considered in isolation. Sugden and Luiz (2014) observe that privatisation has affected every continent but there are unique features and experiences that reflect the local context. In Zimbabwe a nuanced regulatory environment that builds upon the emerging realities is, however, needed.

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REFERENCES

- ADB (African Development Bank). 2010. Country brief 2013-2015: Zimbabwe.
[www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/2013-2015 - Zimbabwe - Country Brief.pdf](http://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/2013-2015_-_Zimbabwe_-_Country_Brief.pdf) (Accessed 17 December 2015).
- Ahlers, R.; Cleaver, F.; Rusca, M. and Schwartz, K. 2014. Informal space in the urban waterscape: Disaggregation and co-production of water services. *Water Alternatives* 7(1): 1-14.
- Ahlers, R.; Guida, V.P.; Rusca, M. and Schwartz, K. 2012. Unleashing entrepreneurs or controlling unruly providers? The formalization of small-scale water providers in Greater Maputo, Mozambique. *The Journal of Development Studies* 49(4): 470-482.
- Ainunson, K. 2010. Urban water politics and water security in disadvantaged urban communities in Ghana. *African Quarterly* 11(4): 59-82.
- AMCOW (African Ministers Council for Water). 2012. *Water supply and sanitation in Zimbabwe: Turning finance into services for 2015 and beyond*. An AMCOW Country Status Overview. Harare, Zimbabwe.
- Bakker, K. 2007. The commons versus commodity: 'Alter'-globalisation, anti-privatisation and the human right to water in the global South. *Antipode* 39(3): 430-455.
- Broderick, T.J. 2012. Notes on Harare groundwater situation.
http://archive.kubatana.net/docs/watsan/broderick_harare_groundwater_1210.pdf (accessed 17 December 2015)
- Budds, J. and Hinojosa, L. 2012. Restructuring and rescaling water governance in mining contexts: The co-production of waterscapes in Peru. *Water Alternatives* 5(1): 119-137.
- Butterworth, J.; Sutton, S. and Mekonta, L. 2013. Self-supply as a complementary water services delivery model in Ethiopia. *Water Alternatives* 6(3): 405-423.
- Chigomarerwa, N. 2011. Availability and potability of domestic water from alternative sources in the city of Harare, Zimbabwe. BSc thesis, Department of Soil Science and Agricultural Engineering, Faculty of Agriculture, University of Zimbabwe.
- Chioreso, R. 2008. Impacts of water scarcity on households in Harare, Zimbabwe. Unpublished MSc thesis in partial fulfilment of the requirements of the MSc degree in Integrated Water Resources Management (IWRM), Department of Civil Engineering. University of Zimbabwe.
- Davis, J. 2004. Corruption in public service delivery: Experience from South Asia's water and sanitation sector. *World Development* 32(1): 53-71.
- Freire, M.E.; Lall, S. and Leipziger, D. 2014. *Africa's urbanisation: Challenges and opportunities*. Working Paper No. 7. Washington, DC: The Growth Dialogue.
- GOZ (Government of Zimbabwe). 2013. *National Water Policy*. Harare, Zimbabwe. Ministry of Water Resources Development and Management.
- Herman, C. 2009. Commoditization, consequences and alternatives: Lessons from the privatization of public services in Europe. Vienna, Austria: Working Life Research Center.
- Leys, C. 2008. *Total capitalism, market politics, market state*. Monmouth: Merlin Press.
- MacCarthy, M.F.; Annis, J.E. and Mihelcic, J.R. 2013. Unsubsidized self-supply in Eastern Madagascar. *Water Alternatives* 6(30): 424-438.
- Madaka, E. 2012. The right to water-analysing the legal perspectives of water as a right with specific reference to Zimbabwe. Zimbabwe: Faculty of Law, University of Zimbabwe.
- Mangwanya, L. 2011. Individual and collective action responses to water scarcity in the city of Harare, Zimbabwe. MSc thesis. University of Zimbabwe, Harare, Zimbabwe.
- Manitoba Health Unit. 2013. Bulk Water hauling guidelines. Guideline #13-01.
www.gov.mb.ca/health/publichealth/environmentalhealth/protection/docs/bulkwater.pdf (accessed 1 September 2013)
- Manzungu, E. and Chioreso, R. 2012. Internalizing a crisis? Household-level response to water scarcity in the city of Harare, Zimbabwe. *Journal of Social Development in Africa* 27(1): 111-135.

- Manzungu, E. and Machiridza, R. 2005. An analysis of water consumption and prospects for implementing water demand management at household level in the City of Harare, Zimbabwe. *Physics and Chemistry of the Earth* 30(1): 925-934.
- Mason, P.R. 2009. Zimbabwe experiences the worst epidemic of cholera in Africa. *The Journal of Infection in Developing Countries* 3(2): 148-151.
- Mate, R. 2005. Stillborn in Harare: Attempts to privatize water in a city in crisis. In McDonald, D.A. and Ruiters, G. (Eds), *The age of commodity: Water privatization in Southern Africa*, pp. 225-239. London: Earthscan.
- McDonald, D.A. and Ruiters, G. 2005. Theorizing water privatization in Southern Africa, In McDonald, D.A. and Ruiters, G. (Eds), *The age of commodity: Water privatization in Southern Africa*, pp. 13-42. London: Earthscan.
- Misiunas, D. 2005. Failure monitoring and asset condition assessment in water supply systems. PhD thesis. Lund University, Lund, Sweden.
- Mlambo, E. 2011. Operational framework of bulk water suppliers in Harare and their implications for planning. Zimbabwe: Department of Rural and Urban Planning, University of Zimbabwe.
- Mudenda, M. 2013. Decentralisation, private bulk water companies and urban domestic water supply: The case of Harare City. Unpublished MSc thesis. Centre of Applied Social Science, Faculty of Social Studies, University of Zimbabwe.
- Mulreany, J.; Calikoglu, S.; Ruiz, S. and Sapsin, J. 2006. Water privatization and public health in Latin America. *Revista Panamericana de salud Publica/Pan American Journal of Public Health* 19(1): 23-32.
- Murungweni, Z. 2011. Zimbabwe National Water Policy. Background Paper on Water Resources Development and Management. Thematic Paper No. 2 – Water Resources, Use, Demand, Planning and Financing submitted to the World Bank Office in Zimbabwe.
- Musemwa, M. 2010. From 'Sunshine City' to a landscape of disaster: The politics of water, sanitation and disease in Harare, Zimbabwe, 1980-2009. *Journal of Developing Societies* 26(2): 165-206.
- Nhapi, I. 2009. The water situation in Harare, Zimbabwe: A policy and management problem. *Water Policy* 11(S1): 221-235.
- Nhapi, I.; Siebel, M.A. and Gijzen, H.J. 2006. A proposal for managing wastewater in Harare, Zimbabwe. *Water and Environment Journal* 20(2): 101-108.
- Pack, H. 1994. Endogenous growth theory: Intellectual appeal and empirical shortcomings. *The Journal of Economic Perspectives* 8(1): 55-72.
- Patton, M.Q. 1990. Qualitative research and evaluation methods. 3rd edition. Thousand Oaks, CA: Sage.
- Prasad, N. 2006. Privatization results: Private sector participation in water services after 15 years. *Development Policy Review* 24(6): 669-692.
- Ramanadhan, V.V. (Ed). 1991. *The economics of public enterprise*. London and New York: Routledge.
- Robbins, P.T. 2003. Transnational and water privatization. *Journal of International Development* 5(8): 1077-1081.
- Robison, R. and Hewison, K. 2005. Introduction: East Asia and the trials of neo-liberalism. *Journal of Development Studies* 41(2): 183-96.
- Romer, P.M. 1994. The origins of endogenous growth. *The Journal of Economic Perspectives* 8(1): 3-22.
- Savas, E.S. 1982. *Privatizing the public sector: How to shrink government*. New Jersey: Chatham, Chatham House Publishers.
- Schwartz, K. 2008. The new public management: The future for reforms in the African water supply and sanitation sector? *Utilities Policy* 16(1): 49-58.
- Sugen, C. and Luiz, J.M. 2014. The experience of private investment in the South African water sector: The Mbombela concession. *Development Southern Africa* 3(4): 563-580.
- Swyngedouw, E. 2004. Social power and the urbanization of water: Flows of power. Oxford: Oxford University Press.
- UN. 2011. Water and sanitation as a human right. New York: United Nations.
- UNDP (United Nations Development Programme). 2005. *Human development report*. New York: Oxford University Press.

- UNECA (United Nations Economic Commission for Africa); AU (African Union); ADB (African Development Bank Group) and UNDP (United Nations Development Programme). 2013. *Assessing progress in Africa toward millennium development goals; 2013 MDG Report: Food security in Africa: Issues, challenges and lessons*.
- UN-Habitat. 2010. *The state of African cities*. Nairobi: UN-Habitat.
- Zimbabwe. 1978. *Public Health Act (Chapter 15: 09)*. Harare: Government Printers.
- Zimbabwe, 1996. *Urban Councils Act (Chapter 29: 15)*. Harare: Government Printers.
- Zimbabwe, 1998a. *Water Act (Chapter 20: 24)*. Harare: Government Printers.
- Zimbabwe. 1998b. *Zimbabwe National Water Authority Act (Chapter 20: 25)*. Harare: Government Printers.
- Zimbabwe. 2001. *Food and Food Standards Act (Chapter 15: 04)*. Harare: Government Printers.
- Zimbabwe. 2002. *Environmental Management Act (Chapter 20: 27)*. Harare: Government Printers.
- Zimbabwe. 2010. *Zimbabwe Millennium Development Goals Status Report*. Harare, Zimbabwe.
- Zimbabwe. 2013a. *Constitution of Zimbabwe*. Harare, Zimbabwe: Government Printers.
- Zimbabwe. 2013b. *Statutory Instrument 90, Water (Permits) (Amendment) Regulations, (Chapter 20: 25)*. Harare, Zimbabwe: Government Printers.
- ZimStat (Zimbabwe National Statistics Agency). 2012. *Zimbabwe Population Census 2012: National Report*. Harare, Zimbabwe.
- ZINWA. 2015. Operation to stop illegal bulk water trade. www.zinwa.co.zw (accessed 17 December 2015)
- Zinyama, L.M.; Tevera, D.S. and Cumming, S.D. (Eds). 1993. *Harare: The growth and problems of the city*. Harare: University of Zimbabwe Publications.

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