Chapter 10
Coping with Erratic Water Supply in Small Towns

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ABSTRACT

In Sub-Saharan Africa, artificial water shortages are common due to financial constraints impeding the procurement of adequate equipment to harness water. Most previous studies on variability of water supply in sub-Saharan Africa have largely focused on large urban settlements such as cities and towns. Thus, this chapter therefore presents findings from a study conducted to assess the causes and effects of erratic water supply in Kamwaza Township in Zimbabwe as well as to establish and evaluate coping strategies to the problem of erratic water supply. From the study, it was also observed that erratic water supply has socio-economic effects and these include high incidences of diseases, disruption of service delivery at institutions such as the hospital, clinic and schools and retarded infrastructural development. The study recommends a collaborative approach from all stakeholders in solving the problem of erratic water supply by upgrading the pumping station, repairing leaking pipes, employing people with technical expertise and sinking boreholes.

INTRODUCTION

The importance of water is evident in human settlements patterns as access to water is a chief determinant in the choice of a site. This explains the reason why major towns such as Berlin, Bangkok, Rio de Janeiro and Harare are located close to reliable and regular water sources. Although many settlements were established on fountains appeared to have a secure source of water, increasing number of people and economic developments resulted in an ever-increasing demand for water. Erratic water supply causes inconveniences and hardships particularly to urban dwellers. As water consumption has risen due to the expanding population, enlarged areas under irrigation, industrialization and urbanization, water has increasingly become a scarce commodity despite the fact that it a basic human need (Heyns, 1993;
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Jacobson & Seely, 1995). With growing population and an ever-increasing demand of water by agriculture and industry, stresses are exerted on available scarce water resources (Carr, 1997; Stout, 1997). The sustainability of life on earth depends heavily on water hence its shortage brings with it a host of challenges (Moyo et al., 1993). Scarcity of water is commonly cited as the reason for retarded development. The poor supply of water results in disruption of activities in industry, agriculture as well as learning and health institutions (Falkenmark & Wildstrand, 1992; Lurna & Kenneth, 1992). Women and children are regarded as being more vulnerable to the effects of erratic water supply as they are heavily engaged in domestic chores (World Bank, 1995; Jackson, 1997).

The following are the guiding standards for water provisions so that the health of people is not compromised (WHO, 2006):

- A minimum of 15 liters of water per person for domestic use on daily basis.
- A maximum distance of 500 meters to the nearest water collecting point.
- Drainage or spillage from defecation or chemical plant must not run towards any surface water source or groundwater supply.
- Water for domestic use must be available and reliable for 90% in any given time series.

Water scarcity arises as consequence of a high rate of aggregate demand from all water-using sectors compared with available supply, under the prevailing institutional arrangements and infrastructural conditions. It is manifested by partial or no satisfaction of expressed demand, economic competition for water quantity or quality, disputes between users, irreversible depletion of groundwater, and negative impacts on the environment. Hence, there is need to employ coping strategies due to deal with poor water supply.

BACKGROUND

The share of Africans living in urban areas is projected to grow from 36 percent in 2010 to 50 percent by 2030. The continent’s urbanization rate, the highest in the world, can lead to economic growth, transformation, and poverty reduction. Alternatively, it can lead to increased inequality, urban poverty, and the proliferation of slums. The laws, policies, and actions needed to reap positive dividends from Africa’s urbanization are therefore critical in the continent’s transformation (World Bank, 2015). Small towns have important role to play in the process of rapid but prolonged urbanization in Africa, where urbanization is not driven by industrialization but by a disguised ruralization. Nevertheless, rapid population growth has impacted negatively on service provision. Hence, concern for adequate and sustained water supply for cities and towns is vital in the context of climate change, industrialization, globalization, population growth and rapid urbanization. If urban growth is not sustainable, most cities in the developing countries will use many and expensive coping strategies.

Increasing shortages of water have presented challenges to local institutions and governments in defining and accommodating people’s rights over the use of water at the local level while at the same time ensuring its most efficient use. In face of growing scarcity of water, it has proved imperative to use water wisely and to avoid unnecessary wastage. Dams have been constructed as they store large volumes of water (Mukwada, 2000). The storage of water in dams has enabled people to meet their demand for water especially in regions where the dry and wet seasons are well pronounced. Water recycling is considered as a conservation measure. The process of water recycling involves the reclamation