

Recommendations

5.1 Introduction

In this chapter, the recommendations will be presented, based on an evaluation of the research findings, the literature survey, as well as the responses of water users, the politicians and the officials interviewed. This is followed by the final conclusion to the study.

The research has found that potable water is not equitably supplied to all the residents in this district. There are a number of reasons mentioned by the affected residents, politicians and municipal officials for why this situation exists. Among the reasons given, the following were common among the respondents: Purification plants in rural wards are malfunctioning; also private water tankers sometimes do not deliver water regularly to rural communities, where there is no access to potable water.

Ugu District Municipality is currently facing a financial crisis, water standing pipes sometimes dry up; and community members perceive that politicians and officials are not accountable to the residents for service delivery, such as water. The researcher makes the following recommendations.

5.2 Rural area wards

- 5.2.1 The small purification plants in rural wards, in particular, have failed to supply water adequately to the residents. This has been confirmed by the research presented here. It is, therefore, recommended that large storage dams need to be built in the district. These dams could be used to store unprocessed, as well as purified water.
- 5.2.2 The Ugu District Municipality should form partnerships with other water-service providers (WSPs), such as the Durban Metro Municipality and Umgeni Water. This partnership would help to ensure that access to potable water is maximized for the benefit of all the residents in this district.

- 5.2.3 As the oceans make up 97% of the world supply of water (Water and Process Technology 1997-2010), a further option could be a desalination plant. Although desalination is an expensive way of purifying water, more money could be set aside for this project. The challenge of rural communities not having any access to potable water should be thoroughly addressed.
- 5.2.4 The lack of infrastructure to access ground water could be another factor that could result in rural communities not having any access to potable water.

5.3 Water Infrastructure Systems

One of the factors that contribute to the water shortage in South Africa, particularly in rural areas, is the deterioration of the infrastructure systems (McKune, 2010). For the water supply to function effectively, it needs to be well-managed, and regularly serviced, in order to support the distribution and treatment of potable water.



Illustration 12: This illustrates the deteriorating water infrastructure that has not been serviced for many years. The infrastructure is failing to distribute water. Source: Mercury

- 5.3.1 It is recommended that the Ugu District Municipality maintain proper infrastructural management and service. This would improve the equitable potable water supply, particularly to rural communities that are currently without any access to clean water.
- 5.3.2 Another recommendation is that the Ugu District Municipality should hire skilled personnel who could use their relevant skills to manage and service the water infrastructure regularly. The small purification plants in rural wards should be moved, and gradually replaced by dams, because these small purification plants, together with the private water tankers, take a substantial amount of money from Ugu District Municipality (SOA, 26/08/2011, interview 04, General Manager water section).

5.4 Water Tankers

- 5.4.1 It is recommended that the use of private water tankers be gradually reduced, as the Ugu District Mayor has suggested (SOA, 26/08/2011, Interview 02, Ugu Mayor). The district municipality, on the other hand, should also gradually increase the numbers of its own water tankers. This practice would reduce expenditure and improve service delivery.
- 5.4.2 This district municipality should use its engineers, who are familiar with geohydrology, to search for underground water. On finding groundwater, drilling trucks have to be sent to the sites to drill water and install water pumps. This should be carried out, particularly in rural areas, where access to potable water is limited.

This exercise would assist the district municipality in addressing the backlog of water distribution. This would also assist the municipality to work on the water-system upgrade, and to address the increasing demand for water caused by population growth.



Illustration13: Drilling for water is a long-term solution to communities with no potable water connectivity. Source: the connector drilling.com.

5.5 Population growth

Population growth is another factor that contributes to water shortage in this country. Khatri and Vairavamoorthy, (2007:8-10) and Tempelhoff, (2010:91) all maintain that population growth and urbanization are enforcing rapid changes that will ultimately lead to a dramatic increase in high quality water consumption. This increasing demand proves impossible to meet from local water resources. On the other hand, the discharge of insufficiently treated wastewater increases the cost for downstream users. It also has a detrimental effect on the aquatic plant and animal life.

Statements made at an international conference on water scarcity, global changes, and ground-water management responses of 2008 1-6 (UNESCO-IHP, 2008:8) affirms the notion of population growth as another factor that contributes to water shortage. The conclusion here was that global changes, such as population growth, climate change, expanding urbanisation often combined with pollution, severely affect water availability; and this then leads to chronic water shortage in a growing number of regions. These are the major factors that contribute to water shortage. The scenario is the same as that in the rural communities of Ugu District.

The conference also stated that within 25 years two thirds of the world's inhabitants would live in countries with serious water problems, South Africa was also included in the list of threatened countries. Migration and urbanization are further factors that contribute to population growth in urban areas, because millions of people live in rural areas with the intention of finding jobs in the cities, thereby creating a huge demand for water from the rather limited resources.

Coetzee, Graaff, Hendricks, and Wood, (2001:185) stated that South Africa's mining industry has recruited many people in South Africa, and from neighbouring countries, such as Zimbabwe and Lesotho, in order to employ cheap labour. This has increased the demand for potable water.

5.5.1 The recommendation is that Ugu District Municipality should now prioritise the rural communities for the supply of potable water. The reason is that the increase in population has resulted in a potable water demand that is taking place in urban areas. Eventually, the rural communities will be completely deprived of potable water.

5.5.2 Consequently, the use of drilling trucks would constitute another solution to supplying water to rural residents, once land with ground water has been discovered. It is, therefore, important that the Ugu District Municipality should formulate goals that could educate municipal employees, the public and business people, as outlined below. These goals would create the road map to achieving the constitutional mandate of supplying potable water equitably to all residents.

5.6 The Goals of a Public Education Programme

The Ugu District Municipality, as a Water Service Provider (WSP), should formulate achievable goals for its public education programme. These goals should benefit both the municipality and the residents. The recommended goals could be as follows:

- *Reducing water demands, and minimizing water loss.*

This should include education regarding the connection between groundwater, wells and surface water.

- *Educate people about water-smart landscaping, gardening, efficient irrigation, and lawn-care practices.*

The water used for landscape irrigation can be lost due to over-watering, evaporation, or bad irrigation system design, or even to poor maintenance.

- *Build an enormous dam*

More storage facilities need to be built. The storage of water in these facilities could provide water during times of drought, and decrease the reliance on small purification plants.

- *Educate people regarding water harvesting and water purification*

Such an education exercise would empower people with the ability to purify water and to harvest rainwater. This would help rural communities, in particular.

- *Develop policies that could regulate water pollution*

Restriction measures should be imposed to protect water resources from being over-exploited by industries, which include the farming industry and other sectors. Also, strict water-pollution control should be put in place, to make it possible for the municipalities to regulate industries and prevent people from polluting water.

These goals should consequently, inform the education programme, with the intention of keeping residents and other stakeholders informed on water-management measures.

The water-education programme should firstly be conducted for municipal employees. The municipal employees should from time to time be sent to training courses, and on other relevant short courses, in order to improve their water-management abilities. This education programme would build understanding among municipal employees and other professionals outside the municipality. Building water-conservation consciousness and water-management awareness would save money on operational and production costs.

Educated employees should be able to identify problems before they become serious; and they could help by thinking innovatively about ways to conserve or re-use water within the facility. It is also important for Ugu District Municipality to adopt a proper water-conservation policy, or even to incorporate water-conservation practices, and to instruct the district officials on this issue. Such a water-education programme could also be extended to include the business leaders in the district.

The majority of people in this district receive their water bills through the post. Therefore, this means that water bills can be used as a public water education tool.

It is, consequently, recommended that the water bill should include the following educational information:

- Information on how to use water sparingly; and
- Comparison of each customer's water use with the previous year's usage, and a graph showing use on a monthly basis for the current year.

5.7 Building public awareness

It is also recommended that the municipality should create a post for an individual or an office dedicated to interaction with the public, and one that addresses the concerns of residents regarding water. The appointed individual could, for example:

- Develop, administer and evaluate water activities targeted to customers;
- Manage internal programmes to conserve water;
- Organise external efforts to promote the efficient use of the area's water supply;
- Co-ordinate activities related to indigent water provision;
- Manage and supervise any staff engaged in the water-education programme;
- Establish communication channels that would encourage people to report illegal connections, the stealing of water, and breakages of water pipes in communities.

There are civic organisations that are available in the Ugu District Municipality, like the South African National Civic Organisation (SANCO), Simunye Civic Organisation (SCO), and Abahlali Basemjondolo. The district municipality should develop a programme that could educate these civic organizations on all the water activities that are essential for an equitable water supply. After educating the civic organisations, they would then be able to assist the district municipality in educating their officials on water issues.

The municipality should also develop a programme that would educate residents via a community radio station, newspapers and also on local community radio stations. The media houses are able to reach many people. This programme would make it easy for the municipality to educate masses on all the water issues, at the same time.

The Ugu District Municipality should target schools and other educational institutions, by doing the following:

- Assisting schools to develop programmes that would emphasise the importance of water conservation in the home, in schools, and in the community at large.

- Form partnerships with public education institutions, such as further education and training colleges, universities, museums, nature centres, science centres, aquariums, zoos, and other government departments.
- Work with the Department of Education in developing a curriculum that would educate learners on all water-management issues, in addition to other activities.

5.8 Informative website

Most customers have access to the Internet; and many use it as a primary source of communication. The water bill should be sent through emails to customers. The water bill invoice should include the following:

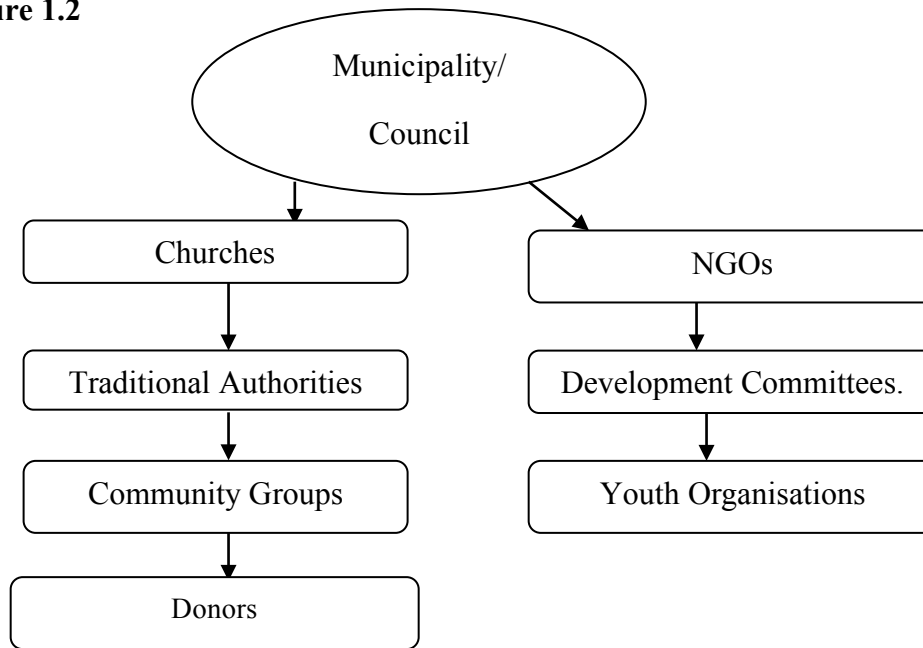
- Information about the water-rate structure, and how customers are charged for water services;
- A water-education programme, which would include conservation, rainwater harvesting, water purification, and suchlike.
- General information about municipal local water resources;
- Information about the current outdoor watering schedule, and where customers can go to access information regarding water supply and other water-related issues.

5.9 Collaboration of stakeholders

In the Ugu district, it is crucial that all stakeholders should work together, rather than in isolation, in seeking solutions to address the problem of water access for the residents of this district. Figure 1.2 depicts stakeholders within the jurisdiction of Ugu District Municipality area. The figure also emphasises the need for stakeholders to work co-operatively to address the challenge of potable water access – particularly in rural areas.

The municipality must hire and train its officials, so that they would be well-equipped with skills to spearhead the provision of service delivery to the people.

Figure 1.2



This is the reason why the statement in Coetzee *et al.* (2001:486) stated that NGOs and churches are “overlapping civil society institutions”, which means that both of these institutions have the ability to promote high moral values in a society, and to also take an active role in community development. Furthermore, Turok also states that churches need to move away from the mentality of being anti-government, and from playing a liberationist role, and also from being just welfare or charity organizations. They need to integrate themselves into the current developmental strategy of sustainable development.

Korten’s developmental strategies, as discussed in Coetzee *et al.* (2001:487-488) further substantiate the notion of stakeholders working together to advance service delivery.

5.9.1 First-generation strategy: Where NPOs and churches are involved in service delivery to meet community needs, such as providing food, health care, shelter and education.

The example could be the Apostolic Faith Mission Church, at Sikhawini Township North of KwaZulu-Natal under Pastor A. Shange, where the church started a church school. Another example could be the Norwegian Church in Port Shepstone, which started a Hospice for terminally ill AIDS victims.

Korten also presents the church as the institution that provides service delivery. The practical example is the Bellville Methodist Church that started the outreach programme, which includes caring for pregnant women in crisis (Coetzee *et al.*, 2001:487).

5.9.2 Second-generation strategy: This concerns the ability of the congregation, community or the society to meet its own needs through self-reliance. The example is Ziphakamise, a NPO in Port Shepstone that offers different programmes, which include educating communities on how to prevent HIV and AIDS. Other programmes educate people on how to live a healthy lifestyle, when already infected by this condition.

5.9.3 The third-generation strategy: This refers to NPOs influencing the national policies to support their developmental programme agenda. For example, the Treatment Action Campaign (TAC) lobbied the State, through petitions, peaceful demonstrations and Government iZimbizos on behalf of HIV- and AIDS-affected people to be supported with ARV medication.

Another example is feminist organizations for the rights of women, insisting to be treated as equal with men: at work, in the society and by the Constitution. These strategies stated above can also be applicable to communities that do not have access to potable water (Coetzee *et al.*, 2001:488).

The national government needs to enhance financial monitoring systems through the Auditor General's office. This exercise would minimize corruption and maladministration in the spheres of government, and particularly in local government. Van de Valdt and du Toit (1998: 163) argue that in order for the government of the day to achieve its objectives effectively and efficiently, it must have a sound financial relationship with all spheres of government. The improvement of water infrastructure, technology, financial and water management would assist municipalities to deliver basic services speedily to all their residents (Little, 2002: 169).

The municipalities should also employ qualified officials who can manage the business of administering the municipality in an accountable manner, so that service delivery could improve. This implies that the politicians and municipal managers should be educated concerning strategic management, as mentioned by Rossouw, Le Roux and Groenewald (2007:1).

The African National Congress (ANC) document Strategy and Tactics (ANC, 1997) states that for an organization to succeed, it must plan and strategise. This means that politicians and

officials must be able to plan, review, budget, manage and control the activities of the municipality - thereby, allowing for basic services like water to be prioritised.

As many as 90% of Malawians use wood for domestic consumption; and this problem has accelerated deforestation in this country, according to Moyo and Epulani (2001:41-42). To solve the problem of deforestation, fuel briquettes (the modern method or technique of making fire for heating and cooking in Malawian households) was developed, as an alternative to using firewood.

In communities in South African rural areas, where access to water is minimal, there is a need to be innovative regarding water schemes; and thereafter to approach the municipality for funding. For example, funding could assist communities in buying water tanks to store water from natural springs in the area. As a result, a number of people could thus gain access to clean water, whilst the municipality provides them with piped water.

The involvement of all stakeholders is essential, as is the need to improve networking with the international community and intergovernmental relations – for the purpose of raising funds and for the acquisition of skills. This exercise, would fast-track the goal of equitable access to water, even in the rural areas where water connectivity is minimal.

5.10 Conclusion

While politicians need to work cooperatively on the question of water, more money needs to be channelled towards the management of water and for spearheading the question of providing water to rural communities. Ward councillors need to urgently participate in educating communities about water. Moreover, the Traditional Authorities, *iziNduna* (Local head men in rural areas), Churches and Non-Profit Organizations need to work co-operatively with the municipality, in addressing the challenge of access to potable water.

This study has ascertained that water is not equitably distributed to all the residents of Ugu district municipality. A number of comments have been stated from the community where the study was conducted, and from the municipal officials and politicians. The residents, in particular in rural areas, have perceived that various ways and means are used for election purposes.

The politicians and officials mentioned that there are a numbers of projects in construction that would address the access to potable water, particularly in rural areas. Ugu district municipality is

faced with a serious water challenge; however, that does not altogether prevent the supply of potable water to the residents, but it does limit it.

The study also discovered that there are communities that are still sharing water with animals from wells. Also a number of residents are not educated on water harvesting and on water purification; and they travel long distances to fetch water. Women are exposed to the danger of being raped, and children are sometimes hijacked.

The study also found that water standpipes do dry up in areas where there is a water-connectivity problem, without any public notice. The water tankers do not come often to places where there is no water, and also where standing pipes have dried up.

The best solution to this matter would be that the Ugu district municipality should use its engineers to source groundwater, by using the drilling trucks. This could be the long-term solution in addressing the water challenges in this district municipal area. Lastly, the district municipality should educate communities on issues, such as rain harvesting and water purification.