

The Role of Public Utilities in Accelerating Growth

A Case Study of Umgeni Water in the Mbizana Local Municipality

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ABSTRACT

The aim of this article was to determine the role of a public utility in accelerating growth in a local municipality. The South African (SA) Constitution of 1996 places an obligation on the national government to take reasonable action to give effect to the general rights of the population. While national government is required to establish a framework to ensure the realisation of rights relating to access to water, local government has the responsibility to ensure the delivery of services such as water to their local population, commerce and industry. These services form the foundation for growth and development in municipalities. Most municipalities do not have sufficient capacity to maintain their infrastructure, and cannot implement large scale infrastructure projects. The national government can accelerate growth by engaging a partner with more capability than local government e.g. a public utility to assist municipalities in water services provision, thereby creating social development as well as assisting national government to deliver on their developmental mandate. This research analyses this solution by researching the case of Umgeni Water as an implementing agent of the Mbizana Local Municipality and assessing the impact of water provision on development in that area.

INTRODUCTION AND CONTEXT

According to Grey and Sadoff (2006:5), water is one of the key drivers of social and economic growth for most forms of development. This research explains the roles of public water utilities in accelerating growth and development. It further focuses on the strategic role of Umgeni Water (UW) as an enabler for improved service delivery in the Mbizana Local Municipality (MLM), which contributed to an improvement in the quality of life in the local community.

South Africa has enabling legislation for water provision. The Constitution of South Africa of 1996, (hereafter referred to as the Constitution), binds all three spheres of government to realise the right of access to water (RSA 1996b). The Constitution does not provide the rights of individuals to access water, but rather places an obligation on the government to take reasonable action to give effect to the general rights of the population. While the national government is required to establish a framework to ensure the realisation of this right, local government has the responsibility to ensure the delivery of water to their communities. In the case of MLM, the government has a mammoth task of changing the face and outlook of the Eastern Cape Province (ECP). Although the South African government is making efforts to address the service delivery backlogs in many areas, such backlogs are severe and are a result of historical neglect, resulting in development being hampered in areas such as the ECP. Backlogs in one basic service area like water can have an interrelated effect on other services like sanitation, public health, food security, education and housing. When one service is lacking, there is a spin-off effect on other sectors which may spiral out of control. Water has to be the centre of planning in order to address areas of health, sanitation, agriculture, education, and housing.

The Statistics South Africa Community Survey: Basic Results Municipalities (2007:36) revealed that KwaZulu-Natal (KZN) and ECP are the only two provinces where access to piped water is below the national average of eighty eight point six percent (88.6%). According to a February (2009:20) submission by the Centre of Applied Legal Studies (CALs), on Access to Water and Sanitation in South Africa, findings were that MLM is the worst performing municipality in terms of service provision and addressing backlogs in South Africa, with a change of minus twelve point seven percent (-12.7%) reflected in comparisons between the Census 2001 and the Community Survey 2007 (Statistics South Africa 2010: 34–36).

The socio-economic conditions described in the South Africa Community Survey (2007:5–12), illustrate the urgent need for growth and development to take place in the MLM. The Mbizana Integrated Development Plan (IDP) (2008:33) states that the MLM's unemployment rate, at seventy five point four percent (75.4%), is not only the highest unemployment rate in the OR

Tambo District Municipality (ORTDM), of which MLM forms part, but is also the highest unemployment rate, both provincially and nationally (MLM 2008:33). In 2011, the Alfred Nzo District Municipality (ANDM) expanded its municipal boundaries, with the inclusion of Mbizana and Ntabankulu Local Municipalities. Since the population is not economically active, there is concern regarding the number of people leaving the ECP. A mere two percent (2%) are employed in the construction sector, with no opportunities for employment in the public utility sector, due to no major infrastructure in this municipality. Poor infrastructure impacts negatively on the profitability and viability of industries. Provision of roads, electricity and other specific infrastructure requirements are critical for the survival and growth of existing industries and the development of new ones. Public utilities play an important role in service provision due to the nature of services provided. Water, gas and electricity services have a vital role to play in the provision of basic services for the population, the growth of other economic sectors and in the development of society as a whole. According to the Department of Water Affairs (DWA), 2003, the water utilities created by the South African government make significant contributions to the economy of South Africa, with the majority of them located within the major cities of each province. Water boards, as part of public water utilities, created and overseen by the DWA, play an important role in the entire water supply chain. A water board provides an important option for local authorities, alongside private entities, in providing sustainable water services (<http://www.dwaf.gov.za>). Whilst the national government is required to establish a framework to ensure the realisation of this right, local government has the responsibility to ensure the delivery of water to their communities. Water utilities operate dams, bulk water supply, infrastructure, some retail infrastructure and some wastewater systems. Some also provide technical assistance to municipalities. Through their role in the operation of dams, they also play an important role in water resources management.

Umgeni Water has entrenched within its strategy the developmental pillar to contribute to the national developmental agenda and reduce backlogs. To this end, UW has added a key performance indicator to continue to provide ongoing support to municipalities, in particular, as an implementing agent for the GMBWSS (Greater Mbizana Bulk Water Supply Scheme) as well as institutional support and development for water services in respect of the ORTDM. This target allows UW to contribute to the development agenda. To holistically address the water service backlogs in the country requires a coordinated and integrated approach. This is in the form of different water service provision models and institutional arrangements that allow water services backlogs to be fast-tracked. Whilst UW's area of supply is within KwaZulu-Natal, its mandate also allows it to assist in other areas by special demand. Such a case existed in

the Eastern Cape Province. In 2007, the ORTDM approached UW and entered into a management contract arrangement to assist in identifying improvements in the bulk water supply system in its area of supply. According to the 2008/9 Umgeni Water Annual Report, UW was appointed as the Implementing Agent for DWA to construct the GMBWSS, which was to be handed over in 2013 to the ANDM for operation and management. The beneficiary of the scheme is the MLM (UW Annual Report 2009:12). To this end, UW added a key performance indicator to continue to provide on-going support to municipalities, in particular, as an implementing agent for the GMBWSS, as well as offering institutional support and development for water services in respect of the ORTDM.

A public utility is the 'catalyst' for growth and development. The government can accelerate growth by engaging a partner with more capability than local government e.g. a public utility. It should be noted that in order for the above model to work, the different spheres of government still have to play their roles according to legislation. Public water utilities should assist municipalities in water service provision, thereby creating social development as well as assisting government to deliver on their developmental mandate. It is with this rationale in mind that the researcher demonstrates the role of a public utility, in this case, UW, in accelerating growth, which was been done through assessing the impact of water provision on development in MLM. Assessing this growth will assist the researcher in ascertaining the role of public utilities in terms of socio-economic growth, including job creation, local economic development and capacity building, amongst others and answering the question "What are the impacts of the water services provision interventions by Umgeni Water on growth and development in Mbizana Local Municipality, Eastern Cape?"

This article is a case study to investigate the validity of aspects of the above ideas.

LITERATURE REVIEW

A number of studies, research papers, and discussions presented a solid foundation for the rationale for this research on the role of public utilities in accelerating growth. The review of literature provided a vast number of challenges faced by local government in water services provision. Literature by Koma (2010:116) presented the state of local government in South Africa, highlighting challenges and issues that needed national government interventions. Most of the research conducted presented the strong role of public utilities in accelerating growth and development, by partnering with a needy local municipality in terms of capacity building. Research on "Water is a Public Service" conducted by Hall (2000–2009) on, in particular, presented

a strong foundation for the dominance of the public sector and accelerating service delivery. The strengths and achievements of public utilities in literature presented by the Public Services International Research Unit (PSIRU) offered an argument for accelerated growth. After researching the various models for service delivery for South Africa, it has become evident that there is a range of frameworks to enable water services provision at the local level, either with one or a mixed method model of delivery. These frameworks address water services objectives and targets to be achieved, as well as financial, planning, regulatory, institutional, monitoring, reporting and support issues.

Whilst there are many successful examples presented in the literature on partnerships in the public sector, exact figures and statistics are lacking in all literature in terms of growth. The Vulindlela Water Supply Scheme (VWSS) project which started in 1993, provides figures and amounts that can be used as a comparison for GMBWSS, as both of these schemes have similar objectives.

Why use Public Utilities in Service Provision?

At a 2006 seminar on 'Reforming public utilities to meet the water and sanitation Millennium Development Goal', organised by the World Development Movement and Water Aid, Antonio Miranda, a member of the UN Secretary General's Advisory Board (UNSGAB) on Water and Sanitation stated *"There is nothing that the private sector can do that the public sector cannot. The public sector can do everything that the private sector can do and more"*.

Kumar (1994:33) states that an important feature of public utilities' undertakings is that they are closely held by the government as they are generally state monopolies. Despite being organised as public corporations or autonomous companies, their autonomy and business freedom are subject to State policies and direction.

As already indicated, the DWA uses public utilities as "catalysts". At a briefing session in Parliament held in March 2013, the then Acting Director General of DWA, stated that there is a goal to change the existing paradigm and role of water utilities in South Africa, in order for them to become more directly involved in assisting the Water Services Authority (WSA) and municipalities in service delivery objectives (DWA 2011). Water Boards are effectively an extension of the government and it is asserted that they need to play a more proactive role in assisting the government and the water sector.

Kane (2004:16) states that the public sector has both a strong interest and a legitimate role to play in developmental efforts. He states that government helps to foster and encourage development and growth through investments in public infrastructure, the provision of public goods and services, and targeted assistance to industries, businesses and workers.

The Pinsent Masons Water Yearbook (2010–2011:41) statistics show that public utilities are responsible for most water and wastewater services worldwide, and in 2010 only about twelve percent(12%) of the world's population had privatised water or sewer services (Pinsent Masons 2011:54).

According to Hall and Lobina (2006:3), a study showed that ninety percent (90%) of the largest cities (with a population over 1 million) world-wide, were served by a public sector operator in mid-2006.

Strengths and Achievements of Public Utilities

Extensive research has been conducted by two of the leading proponents of public utilities; the Public Services International Research Unit (PSIRU) and Transnational Institute (TNI). These institutions list the strengths and achievements of public utilities as:

- training and developing human resources;
 - technical support on a wide range of issues;
 - improving efficiency and building institutional capacity;
 - financing water services;
 - improving participation;
 - autonomy; and
 - cost effectiveness
- (*PSIRU 2012 :2–18*).

These strengths place the public utility at the forefront not only of improving the infrastructure, but usually also allow for the aim to train and develop human resources, offer technical support, improve efficiency and build institutional capacity. According to Inter-American Development Bank (IADB), public utility services need to contribute to the long-term economic development of the region and to the well-being of its people. It further notes a few policy issues that sum up the role of Public Utilities as follows, to:

- ensure long-term sustainability of the services;
 - achieve economic efficiency;
 - safeguard quality;
 - promote accessibility; and
 - meet wider national objectives
- (*IADB 1996*).

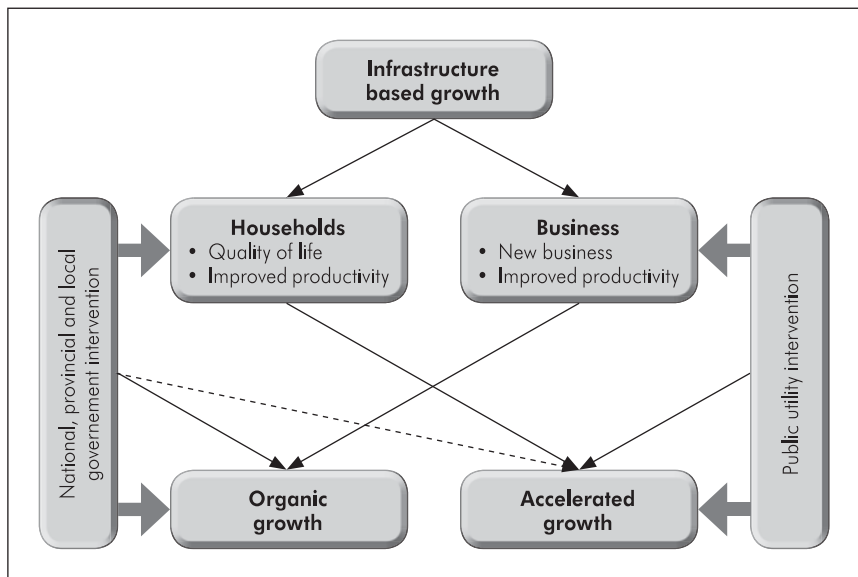
One of the roles of public utilities is to deliver infrastructure and services in line with the national government's objectives or on behalf of the government. An argument put forward by Cheru (2010:3) is that investment in infrastructure has a central role in the development agenda and is critical for supporting growth and

poverty reduction. As a consequence of this under-investment in infrastructure, most countries face the challenge of bridging huge infrastructure gaps that threaten growth and the achievement of social and other broader development goals. A thematic paper jointly prepared by the African Union Commission and New Partnership for Africa's Development (NEPAD) Agency (2011:3) supports this argument by saying that the utmost importance is accorded to infrastructure as the foundation for growth and development. The role of infrastructure development in economic growth has been well documented in the literature. Infrastructure development is an enabler of socio-economic development; it provides a framework for the governance of infrastructure development and illustrates that a renewed focus is being placed on infrastructure development. Advancing infrastructure is vital for promoting growth and for furthering the goals and objectives of regional integration.

Strengths and Achievements of Water Boards

Umgeni Water's 'Accelerated Growth Model' in its simplest form is a model that shows that infrastructure can be provided to households to improve their quality of life and productivity. Infrastructure is also provided for improved productivity in business, as well as the development of new businesses. Both of these types of

Figure 1: Umgeni Water Accelerated Growth Model (UWAGM)



(Source: Umgeni Water, 2013)

provisions are through National, Provincial and Local government interventions, in line with mandates and objectives by the government. This model argues that growth will take place through the organisations' own business activities and is referred to as organic growth (see Figure 1).

The model further provides that the government can accelerate growth by engaging a partner with more capability than local government e.g. a public utility. According to Harpe (2011:18), the government has major support and national leadership roles to play in order to ensure a strong and collaborative sector. The UWAGM shows that with the introduction of a public utility into the equation, growth will take place at a much faster pace, meaning that a public utility is the 'catalyst' for growth and development. It should be noted that in order for the above model to work effectively, the different spheres of government still have to play their roles according to legislation. A review of literature on Umgeni Water and its role in previous partnerships whereby accelerated growth took place, presented the researcher with a working example of how a Public Utility can bring about accelerated growth.

Whilst there are many successful examples presented in the literature on partnerships in the public sector, exact figures and statistics are lacking in all literature, in terms of growth. The UWAGM and the implementation of the VWSS provide figures and amounts that can be used as a comparison to the MLM, as both these schemes have similar objectives. The Vulindlela Water Supply Scheme (VWSS) was a water service provision project to build, operate, maintain and transfer to the Msunduzi Municipality by Umgeni Water in July 2013. This project had the similar goals and objectives as the project in the Mbizana area, it was this intention that the researcher used the model to prove that growth can be achieved in the Mbizana area due the intervention of construction of the GMBWSS.

METHOD

The researcher applied a methodological triangulation of qualitative and quantitative methods for analysing the impact of water service provision in the MLM. By using the mixed method design enabled the researcher to give meaning to the justified claims that are made on the role of public water utilities in accelerating growth in MLM. This method, using statistics and survey results, does not provide the human motivation behind certain preferences and behaviours. It provides depth to the 'facts and figures' and, with reference to this research, can provide ideas for future directions as regards water services provision and the role of water utilities in accelerating growth and development (Creswell 2003:209–210). The research strategy in this research was a 'case

study' on the role of public utilities, in this case, UW, in accelerating growth in MLM. The use of exploratory methods was employed to assess the impact of the water provision by UW on growth and development in MLM. Furthermore, the researcher describes the nature of water service delivery backlogs, as these exist in MLM at the time of the research, and explores the cause/s of particular water related challenges, as well as the possible solutions by service delivery models.

Various methods were used to collect data for this research. Literature review on the MLM, stakeholder engagement meetings minutes, IDP, Community Surveys carried out by Statistics South Africa, Annual Reports, data from UW, all formed part of the collection of data.

Population and samples

According to the 2010 IDP for ORTDM, MLM is made up of 25 wards and is one of the local municipalities under ORTDM. In 2011 ANDM expanded its municipal boundaries, with the inclusion of Mbizana and Ntabankulu Local Municipalities. It is made up of the main town of Mbizana and surrounding villages. It covers an area of approximately 2 806 km². Mbizana, the political and administrative municipal seat, is located along the R61 road, 55 km north of the Umtamvuna River and bordered on the north by Umzimvubu and Ntabankulu Municipalities (ORTDM 2012)

Sample size

The sample was divided into 3 groups in order to increase the view and perspective of the research. A suitable sample of 20 respondents was chosen from each group, with 60 respondents in total. It was anticipated that an optimal and fair spread of data would have been collected as a result of the questionnaires being administered to representatives of different stratification groups including political, Executive and Operational Leadership Umgeni Water Project Management Team and Strategic Staff of Umgeni Water; General Workers, Local Suppliers.

Sampling Methods

The researcher used purposive sampling. This is used primarily when there are a limited number of people that have expertise in the area being researched. In this research, certain subjects were deliberately selected for inclusion in the research; therefore purposive/non-probability sampling techniques were used. Purposive sampling techniques involve selecting certain units or cases "based on a specific purpose rather than randomly" (Tashakkori & Teddlie 2003:713).

The researcher opted for this method as the variation in data collection methods leads to greater validity.

Using the mixed method design provides depth to the ‘facts and figures’ and, with reference to this research, can provide ideas for future directions in regard to water services provision and the role of water utilities in accelerating growth and development.

DATA COLLECTION INSTRUMENTS

Focus group discussions/interviews, stakeholder engagement meetings, literature review on existing topics, as well as questionnaires were used. Since the research was a case study, existing data obtained from UW also formed an important part of the research. This research was divided into two phases:

Phase 1

Qualitative methods were used to explore the legislative framework governing the provision of water in South Africa that enables Public Utilities to entrench their role in development. Statistics South Africa’s General Household Survey (2010:28) provided the baseline information for the current status of backlogs, whilst the MLM IDP (2008–2012) and the Eastern Cape Socio Economic Consultative Council (2009) statistics on MLM provided the basis for information on the unemployment rate, current employment rate by sector and social economic data, to extract the rate of unemployment.

According to Babbie and Mouton (2001:292), the three most common qualitative methods are participant observation, in-depth interviews, and focus group discussions. Due to their experience and subject knowledge of the GMBWSS, focus group discussions were conducted with various project managers and staff, including the Executive Committee members of UW. The discussions carried out with the project stakeholders were helpful in refining the research objectives and in analysing the quantitative data that were collected through survey research. Four structured engagements with MLM and ANDM were conducted. All four stakeholder engagements were representative of the population of MLM and the wider ANDM community. In these stakeholder engagements, specific questions were asked and minutes provided supporting information on job creation and backlog reduction figures, new connections, and skills transferred.

Service delivery and water service provision vehicles and mechanisms was researched. In doing so, the researcher explored how UW has entrenched targets within its strategy to contribute to the national developmental agenda by reducing backlogs. The history of water services provision of the Eastern

Cape and the overview of the water provision backlogs in MLM assisted the researcher to gain an understanding of the number of connections and number of people that would be served with this new pipeline in MLM. In the literature review, the researcher looked at service delivery and water service provision vehicles and mechanisms in particular. The data from Statistics South Africa's Community Survey (2007:33–34) on service delivery backlogs was used as the primary data, and the municipal profile on MLM. Existing data on the project within UW was used. The advantage of this process was that since it is a case study on UW, the in house project managers assisted with the distribution, translation and collection of the surveys to officials, labourers and communities. UW's project office provided minutes and information relating to the project. This included minutes of all Project Steering Committee meetings, progress reports from contracts, environmental reports and institutional and social development matters.

The qualitative data (QUAL) was analysed for key themes and this extract was used and constantly compared to quantitative (QUAN) perspectives. In sequential methods, QUALQUAN sampling is the most common technique encountered in mixed sequential models studies (Kemper 2003:284).

The national government institutions have a major role to play in shaping the economic destiny of South Africa. State institutions are also expected to implement government initiatives like broad based economic empowerment, employment equity, poverty alleviation, and promotion of employment. The provision of social services (education, health, housing, water and sanitation) to the historically-disadvantaged sections of the population is deemed to be a high priority in South Africa.

Phase 2

After analysing the research area, the researcher used a questionnaire with closed questions as the instrument to gather data on the impact that UW has made on the MLM. The questionnaire was based on the qualitative data in Phase 1 information to find convergence. According to Schuerman (1983:151), a closed question is one that has pre-coded answers.

Measurement scale

The researcher used Emory and Cooper's (1995:180–181), five point Likert Scale as a measure to assess the perceptions, attitudes and levels of satisfaction regarding the water service provision by UW, in terms of development. The scale measures the respondent's degree of agreement or disagreement a particular statement and thus with other respondents, thus providing the ability to derive an aggregate score when all the answers are combined.

RESULTS AND DISCUSSION

The response rate to the questionnaire and findings are discussed below.

Response rate

According to Babbie and Mouton (2001:256), a response rate of fifty percent (50%) is adequate for analysis and reporting. It can be deduced that eighty three percent (83%) presents a very good response for the analysis of the questionnaire for this research.

Findings

The project records and Project Steering Committee meetings and the Statistics South Africa Community Survey (2007:33–34) provided the information and statistics for the analysis which follows.

- It was evident that there is a huge **water service backlog** in the MLM from the literature survey of Phase 1 analysis. The existing infrastructure is dilapidated. There is a need to upgrade the existing “dam”, pumping infrastructure, water treatment plant, weir, reservoirs and gravity main in order to reduce the backlogs. It was further noted that there is no tap water in the MLM and water is sourced from springs, rivers, and streams and stored in boreholes. The ORTDM has a water backlog of forty seven percent (47%) of households with no water and nine percent (9%) of households having access to water below RDP standards. Out of the 48 408 households in the MLM, 43 083 of these, which represents eighty nine percent (89%) of the households, have no water provision. MLM is amongst the municipalities with the highest water backlogs in terms of households with no water services. According to Statistics South Africa (2007), four point five percent (4.5%) of households have access to water from taps, approximately three point two percent (3.2%) of people get water from rain tanks and eighty nine percent (89%) of households obtain water from the rivers. This eighty nine percent (89%) translates into 217 villages which have no access to tap water, in comparison to approximately 27 villages which have access to water from taps.
- The **reticulation infrastructure**, as an asset, has exceeded its useful life span. As a result there are leaks on pipes and breaks that are causing losses amounting to about forty percent (40%) of the water that is supplied from the Nomlacu Water Treatment Plant. The weir does not have adequate capacity for the water treatment plant and the consequences are regular supply interruptions and failures. The existing “dam”, pumping infrastructure, water

treatment plant, weir and reservoirs and gravity main need to be upgraded and operational capacity needs to be improved in order to reduce backlogs.

- Ninety percent (90%) of the responses received from Phase 2 of the research confirmed that water is received from streams, with one hundred percent (100%) agreeing that the current **infrastructure in the MLM** is dilapidated and needs upgrading. It was also deduced from the research that the MLM does not have the capacity to implement water infrastructure and a partner is needed to assist with the provision of this infrastructure. Although there was a sixty five percent (65%) positive response rate, thirty five percent (35%) felt the MLM was capable of providing water. The UW Accelerated Growth Model shows that infrastructure can be provided through National, Provincial and Local government interventions in line with mandates and objectives set by the national government. However, this model argues that growth will take place through the organisation's own business activities, referred to as 'organic growth'. The model further provides that the national government can accelerate growth by engaging a partner with more capability than local government e.g. a public utility. Growth will take place at a much faster pace, meaning that the public utility is the 'catalyst' for growth and development.
- Whilst many agreed that **Umgeni Water is a capable partner** to implement water services provision in the MLM, thirty five percent (35%) were undecided. It should, however, be noted that at the time of research, the MLM did not fall under UW's jurisdiction. In October 2013, the DWA announced an extension to UW's boundaries to include the ANDM, which incorporates the MLM. Since 2013, UW has official jurisdiction over that area. The undecided sample may represent a sample of people who did not understand the "legitimacy" of UW as a water board in the area. There is also a perception that UW is an entity concerned only with KwaZulu-Natal, because of its headquarters and "ownership", which may impact on respondents not being able to see the relevance of the value which can be added.
- Water service provision is the **responsibility of the ANDM**. The estimated backlog for water service delivery is 45 652 households with no access to tap water representing ninety four percent (94%), with six percent (6%) having access to tap water (Umgeni Water 2011:15). Through the GMBWSS by UW, a supply of 20 Ml/day of potable water has ultimately been made available to a population of 266,000 people (approximately 44 500 households), allowing for an increase in the average consumption per capita from 25 l/c/d to 75 l/c/d over a 30-year time horizon. The targeted categories of consumers to be supplied with potable water are domestic water users throughout the MLM, and commercial and light industrial users and institutional users, mainly within the town of MLM.

- Although there are currently 227 schools in 217 villages in the MLM (MLM IDP, 2012:108), the first phase of the GMBWSS is targeting about 25 schools for provision of water, whilst most of the **larger villages will benefit** in the next phases of the project.
- According to the MLM IDP (2012:121), agriculture and tourism are the primary active sectors in the local economy. The development of an agricultural development plan is critical, to ensure integrated and effective coordination of agricultural development aligned with the Department of Rural Development and Agrarian Reform. **Water service provision is crucial** for tourism and agriculture in this area in order to drive the local economy. Primary health care clinics have no water except for rain water tanks. Hospitals depend on water service provision.
- According to the literature review on the MLM IDP (2012–2014), another key **socio-economic challenge** of the MLM population is significantly low income levels. The response from the questions confirmed that jobs have been and will be created through the GMBWSS project. The GMBWSS has created 779 decent jobs to date. This is based on 1 decent job = 100 person days according to the Expanded Public Works Programme (EPWP) definition. This target is aligned to the government’s mandate of job creation and contributes positively to the Ministerial targets of the DWA.
- All one hundred percent (100%) of the respondents agreed that the water services provision project has **improved local economic development** by using local suppliers in the provision of services.
- The GMBWSS project has **empowered local companies** to provide the following services, therefore developing the local economy:
 - security services,
 - fuel/diesel purchases,
 - hardware/building supplies,
 - food supplies,
 - portable toilet hire,
 - accommodation for site staff,
 - kombi’s to take construction staff home on paid long-weekends and
 - hire of local backhoes and tip-trucks, as required by contractors.
- According to the literature review, high unemployment and poverty levels in the district result in low affordability levels which manifest in low levels of investment, development and service delivery and underutilisation of **development opportunities** (MLM IDP:2009:38). The rural nature of the area limits commercial and business development. Business activities in rural areas are confined to rural supply stores and general dealers (consumptive business). A substantial portion of the District’s money is not being reinvested into the Eastern Cape Province. The District has a limited and almost non-

existent industrial economy and a high dependency upon primary economic activities. Eighty seven percent (87%) of the workers reinvested their money in the MLM local shops and services, thus creating local economic development.

- Better water service provision to the MLM will attract **more investment** to the area. The research revealed that there is no employment in the public utility sector and only two percent (2%) in the construction sector. With the construction of all the schemes components, viz. the raw water supply system, the upgrade and extension of the Nomlacu Water Treatment Plant, and the bulk treatment water supply system, employment has been created in the public utility sector as well as the construction sector.
- **Ownership of all the assets** included in the bulk water supply system is vested in the DWA, and will be transferred to the ANDM, in its capacity as the WSA, upon commissioning of the works. ANDM has indicated its intention to operate and maintain the bulk water supply system. UW, as Implementing Agent, is responsible for the commissioning of the new works. It should be noted that the new plant is technologically advanced compared to the two old plants *and* training of operators has already taken place.
- Further **skills development training** was provided for 30 local people in the MLM at the end of March 2013. Job creation is a requirement by the national government in projects of this nature. The labourers are receiving “in-service” training by the contractors in terms of health and safety, pipe laying, bedding and backfilling.
- Many institutional, social and **development (ISD) issues** raised during project implementation were addressed in 2012 by the ISD facilitator. Pipeline and reservoir access routes, private property access, public road crossings, Eskom power supply connections, re-location of graves, safety awareness training, crop compensation and mining rights for rock and clay for the construction of the dam are included in these activities. Some of the ISD issues included:
 - Over recent years, a considerable number of people have migrated to the villages in close proximity to the urban centre in search of a better quality of life. Eighty seven percent (87%) of respondents came from the local area; it is important to get the **community involved** so that the ownership of these assets are fully realised.
 - The literature survey conducted during this research revealed that a figure of 123 jobs were given to adult men, 21 which were given to adult women, 93 were offered to male youth and a further 19 female youths also received job opportunities. There is an EPWP target that should contribute to the Ministerial targets on **job creation and employment equity**.

- The majority of respondents believed that a public utility like Umgeni Water can bring about **growth and development** in the MLM and will improve the quality of their lives.

RECOMMENDATIONS

The researcher considered a similar model that created a successful bulk water supply scheme known as the VWSS. It was built and funded adequately from central to local government, including a contribution from UW. UW was the implementing agent of this scheme on behalf of the DWA. This scheme was completed and handed over to Msunduzi Local Municipality in July 2013. The water services provision model used in the VWSS was the Build, Operate and Transfer (BOT) model. The water services models usually determine the success or failure of the scheme. The model at VWSS was such that UW raised some loans as part of the delivery of the scheme. UW also used its own resources to operate and maintain the scheme. UW owned the scheme before it was transferred to Msunduzi Local Municipality. This is slightly different from the BOT model. In this model, the implementing agent does not use its capital resources and the operation and maintenance is borne by the owner. The GMBWSS scheme can either be transferred immediately to the WSA, ANDM, after commissioning or otherwise, use the BOT model.

There is another emergent model whereby the bulk component of the scheme can be transferred directly to a water board. This model is being debated by Parliament as there is a realisation that most WSA's cannot handle the bulk component of schemes, especially when it comes to the development of water resources. They usually also do not carry out sufficient maintenance due to the unavailability of skills and financial resources. Poor operations and maintenance, in turn, undermines the long term effectiveness or efficiency of the scheme.

It is, therefore, important to have compared an existing successful scheme and the MLM scheme. This assisted in determining the most effective and efficient model at the end of commissioning.

The Comparison table (Table 1) below shows the information gathered from the interviews with the project managers, documentation prepared by consultants and the EXCO members of UW. This table demonstrates that the model used for both schemes were similar and that, thus far, the GMBWSS is contributing to development.

The development experienced in VWSS from < 1Ml/day of potable water to the current 35Ml/day of potable water is commendable. MLM can/will follow

Table 1: Comparison table

Vulindlela Water Supply Scheme		Greater Mbizana Regional Bulk Water Supply Scheme	
UW role	Implementing agent for DWA	UW role	Implementing agent for DWA
Model	Build Operate and Transfer	Model	Build Operate and Transfer
Population	260 000 people	Population	266 000 people
Start of Project	< 1Ml/day of potable water	Start of Project	2Ml/day of potable water
Current Supply	35 Ml/day of potable water	Current Supply	2 Ml/day of potable water
Future Supply	50 Ml/day of potable water	Future Supply	20 Ml/day of potable water
Job Creation	1206 decent jobs and 50 permanent jobs	Job Creation	779 decent jobs
Wages Paid	R50 million paid in wages	Wages Paid	R14.5 million paid in wages
Training	Training cost during project R10m	Training	Skills development training to 30 local people–R50 000 5 operators trained at laboratories at R250 000
Local Suppliers	R30m spent on local suppliers	Local Suppliers	R6, 2 million spent on local suppliers (MLM) for the procurement of goods and services
Schools/Clinic/Hospitals benefitted from project	62 Schools 7 Clinics	Schools/Clinics/Hospitals to benefit from project	25 schools, 2 hospitals 18 clinics, 227 schools in area but phase 1 targeting 25 schools
Completion date	Handed over July 2013	Completion date	To be completed and transferred to ANDM in 2014. Another model can be used depending on final negotiations at the end of commissioning.

the same developmental pattern as the VWSS, provided that the following happens:

- A similar operation and management approach to that used in VWSS is implemented; and
- the water service provider develops adequate capacity for operations and maintenance, especially the reticulation component (the bulk component can always be given to a water board).

An evaluation of the success of the VWSS in previous research, as cited in the literature review, stated that the VWSS could act as a possible prototype model for similar projects with similar objectives in that:

- The Scheme improved the quality of life for many in a short period of time;
- the Scheme has provided a high quality of water and a reliable water service to the Vulindlela Community;
- the partnership between the community, government institutions and Umgeni Water was very successful; and
- water laid a foundation for growth and development.

The VWSS was a success due to the partnership between the community, government institutions and UW. In terms of the model for Vulindlela, water laid a foundation for growth and development. The GMBWSS has indeed brought about growth and development in a short space of time. The role of public utilities, like UW, in accelerating growth and development is evident in this research.

CONCLUSION

Umgeni Water has been an enabler to municipalities, not only in improving service delivery but by creating jobs, providing skills and training opportunities, local economic development and improving the quality of life for local communities. The objective of addressing water service backlogs in the country requires a coordinated and integrated approach. This coordinated, integrated approach is in the form of different water service provision models and institutional arrangements that allow water services backlogs to be fast-tracked. Whilst UW's area of supply is within KwaZulu-Natal, its mandate allows it to assist in other areas, provided it does not affect the viability of UW negatively. Such a case exists in the Eastern Cape, and MLM is an example of a successful case. Water is one of the key drivers of social and economic development in any community. The role of UW is yet again emphasised in terms of accelerating development. UW is a key player in this regard because of its expertise in bulk water provision and in operations and maintenance of large bulk water schemes.

Since the beginning of construction, an amount of R62 million has been spent at the businesses of local suppliers (MLM) for the procurement of diesel, toilet hire, hardware, transport, accommodation and security services. The schools and hospitals benefitting from this scheme will have a direct impact on the improved health and welfare of the community. Water service provision is crucial for tourism and agriculture in this area in order to drive the local economy development.

Most of the respondents were male and job creation statistics also show that more male jobs were created. More jobs need to be targeted at women. Unemployment is an important indicator of economic development. The decent jobs created and skills which have been transferred will empower communities and their newly acquired trades or skills will support their livelihoods in the future. The GMBWSS project has contributed towards four point six percent (4.6%) of employment.

Approximately R14.5 million has been paid in salaries and wages, thus creating local economic development. Better water service provision will attract more commercial and industrial investment into the area.

In conclusion, the majority of the respondents believe that a Public Utility like UW can bring about growth and development in the MLM and will improve the quality of their lives. All of the research objectives have been met and validated by the respondents. The analysis and interpretation of results indicate that a Public Utility like UW has and will continue to bring about accelerated growth in the country.

Areas for Further Research

Although this research project has identified the impact of development in MLM, Eastern Cape, due to UW's intervention, it is only for phase 1 of the project which is the GMBWSS; it is therefore recommended that a follow-up study be undertaken to measure the entire impact of the research once the project is fully completed. It would also be recommended to assess the sustainability of these projects once they are handed over, in terms of operation and maintenance.

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