

Impact of the Implementation of the Water Demand Management Strategy on Social, Economic and Political Development and Stability in the Context of the Participatory Development Theoretical Framework in South Africa: The Case of Kabokweni Municipality Residence

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Abstract: *The research was aimed at investigating the impact of the Water Demand Management (WDM) on social, economic and political development in the City of Mbombela Local Municipality Township of Kabokweni in Mpumalanga province. This was an attempt to address challenges associated with water delivery service challenges because of lack of compliance to their rights to access enough clean water and sanitation. Qualitative research by means of face to face interviews was used to collect data. The population comprised of 8 purposefully selected respondents from the community of Kabokweni Township comprising of 2 councillors, 2 WDM officials from the City of Mbombela and 4 community leaders. The findings indicated that there is a negative impact of the WDM implementation strategy on socio-economic and political development and stability of Kabokweni Township. Results finally indicated that the participatory development theory was a possible innovative strategy of effectively implementing the WDM policies in order to address these water related challenges. It was then recommended that the WDM officials adopt the Participative development theoretical approach by involving all the community members in planning, designing and implementing WDM policies in order to ensure social, economic and political development in the Kabokweni Township.*

1. Introduction/ Background

The aim of this research is to investigate the impact of the implantation of the Water Demand Management (WDM) on social, economic and political development of Kabokweni Municipality Township in Mbombela. Many studies from a global perspective agree that water is one of the most important basic needs for both human beings and any living creature to survive (Bender & Gibson, 2010; Jansen, 2012). Research also confirms that this survival is not only linked to the need of accessing clean water but sanitation as well (Machethe, 2011). Apart from the fact that water is also an important source for agricultural production (Zerihun & Sanchez, 2014), biological perspectives strongly stipulates that for a healthy human body that is socially and economically productive, water content must be at 60 % with an adult man and 50-55% in women (EFSA, 2010). From a domestic point of view, many authors have indicated that water is necessary for washing, cooking, and drinking and sewerage systems (e.g. Harridden, 2013). In view of this, researchers agree that there is a serious need for effective implementation of Water Demand Management (WDM) strategies by municipalities so as to ensure social, economic and political stability and development (SASA, 2007:22). There is also consensus according to research that while on one hand other people in other areas globally may be having enough water supplies, others on the other hand are faced with water shortage including other parts of South Africa (Machethe, 2010). Critical analysis of the consulted literature above therefore leaves this study with implication that there is a co-relation between Water Demand

Management (WDM) strategies and economic, social and political stability and development.

In the South African context, many studies also confirm that up to now, there are no proper sanitation and water delivery services in place which can be considered effective enough to improve the human livelihood and sanitation challenges (Machethe, 2010; Gibson, 2010; Cape Town WC/WDM strategy Final Draft, 2007; Smith, 2009). There is also convincing evidence that Kabokweni Township community of Mbombela is faced with serious social, economic and political challenges as a result of water crisis despite its recent promises of providing all households with minimum sanitation by 2010, as informed and guided by The Development Facilitation Act 1995 (Act 67 of 1995) (Integrated Development Plan, Mbombela Local Municipality, Volume 1, 2002-2006; Machethe, 2010). Kabokweni is located in the vicinity of the peri-urban of the Mbombela Local Municipality is in the north-eastern part of South Africa within the Lowveld sub-region of Mpumalanga Province Integrated Development Plan (Mbombela Local Municipality, Volume 1, 2002-2006; Machethe, 2010). Such challenges have left many studies focusing on identifying water scarcity challenges which with no tangible solutions by neglecting community participatory based developmental strategies during the implementation of WDM policies.

In view of the above discussions, recent reports indicate that Residents of Kabokweni Township which is located outside Nelspruit, in Mpumalanga has constantly gone without adequate water supply (Mbombela Local Municipality, Volume 1, 2002-2006; Machethe, 2010). Although it is well

understood that natural disasters such as drought are beyond human control, there is still expectation from the community for the government to make immediate provision for such a scarcity under whatever circumstances. While it is a noble idea that much research has been intensively done on identifying challenges associated with social, economic and political challenges, less research has been done on the impact of (WDM) strategies by municipalities in Kabokweni in line with the theories of social and economic development. To cover this gap, this study investigates the impact of the WDM on social, economic and political development of the community with special reference to Kabokweni Township of Mbombela in order to resolve the current water challenges. Furthermore, the study intends to contribute to the theoretical and practical field of human development both socially, economically and politically. It is also the aim of this study to contribute by recommending propose alternative means of enhancing the implementation of the WDM strategies. Study will be done by interviewing the Kabokweni citizens and observation on how the water is distributed.

2. Literature Review

Theoretical Framework

This study is underpinned by the participatory development theoretical framework as aligned to Water Demand Management (WDM) implementation strategies. The term development is normally associated by both economists and politicians as a symbol of growth of a particular society in terms of leading healthy long lives, being knowledgeable, having access to the resources necessary for a decent living standard as well as having the ability to take part in the social life of the community (Streeten, 1979; UNDP, 2010:13). Community development is therefore defined as the process of assisting a community to have supportive strategies for sustainability in terms of meeting its social and economic goals itself as well as progress towards its full potential (Brodie, 2009; IIED, 2010:13). When the community participates in implementation and evaluation of WDM projects and policies, there is a feeling of empowerment and belonging (Brodie, 2009; IIED, 2010:13). In the context of this study, this position allows them to identify water supply related problems that may directly or indirectly affect their socio-economic lives. They are in a position to discuss on problem solving, as well as planning activities which they will be part of and jointly carry out as a community (Brodie, 2009; IIED, 2010:13). The participatory related developmental theories have replaced the traditional approaches which were prescriptive in terms implementing service delivery policies without input of the victims of the challenges (The community). This was associated with a lot of resistance and rebellious behaviours among members of the community (Brodie, 2009; International Institute for Environment and Development (IIED, 2010:13).

Water Demand Management in the Global Perspective

According to the Department of Water affairs and Forestry (2004), Water Demand Management (WDM is defined as the adoption and establishment and implementation of a strategy whereby water institution including consumers' controls, guides and influence the usage of water because of its demand for socio-economic development and political

stability. With the aim of synthesising the two definitions, Turton (2002) in short refers WDM as a policy aimed at managing strategies dealing with water scarcity that may affect human activities.

In the view of Khumalo (2013) and other researchers (Arntzen, 2003; Sibanda, 2002; Wright Donkor, Shehu, & Tefera, 2005), Vision 2025 has been established in Africa as a strategy to develop and implement WDM policies and strategies aimed at eliminating water crisis associated with poverty, underdevelopment, and health challenges. Though this vision seems to have been recognised some years back, research still indicate that water scarcity has an adverse impact on the livelihood of the community (Wright et al., 2005, Khumalo, 2013). This is the reason why from a global perspective, the United Nations strongly supports the implementation of Water Demand Management initiatives associated with participatory development strategies as a way of addressing challenges with water crisis (Khumalo, 2013; Brodie, 2009; IIED, 2010:13).

Water Demand Management in the South African context

In the South African context, most studies have a consensus that management of water resources and the provision of water services in South Africa called for a new approach in which Water Conservation and Water Demand Management (WC/WDM) are expected to play a crucial role to ensure environmental sustainability, social equity and economic development (Reddy, 2011; Gibson, 2010; Thabethe, 2011; Van der Berg, 2012). Although other studies identified some improvements in water delivery strategies to a certain level, the current South African environment is still encountering a broad range of issues that have been seen impacting the effective provision and management of water and sanitation (Reddy, 2011; Gibson, 2010; Thabethe, 2011; Van der Berg, 2012). Critical review of literature also indicates that there are social challenges associated with illegal service provision demonstrations and strikes against non-delivery of basic services such as water supply (Reddy, 2011; Gibson, 2010; Thabethe, 2011; Van der Berg, 2012). Other researchers strongly criticise poor WDM strategies for creating serious water and sanitation crisis in South African communities (Reddy, 2011; Gibson, 2010; Thabethe, 2011; Van der Berg, 2012). From an evaluative point of view, this may be the reason why the Cape Town WC/WDM strategy Final Draft, (2007) and Smith (2009) reports that the main roles of the WC/WDM is to ensure that that water resources are equitably distributed in a sustainable manner and full monitored.

Water demand management in the context of kabokweni township

Critical analysis of literature confirms that just like any other province in South Africa, Kabokweni Township of Mbombala Municipality has also adopted Water Conservation and Water Demand Management Strategy in conjunction with the National Water Conservation and Demand Management Strategy/policies (NWC/WDM WDM policies (Meyer,2007: 32). Recent studies (e.g Gibson, 2010) indicate that availability of Water Resources and adequate bulk water and wastewater infrastructure to meet the growing water demand in Kabokweni Township,

operating under the authority of Mbombela Municipality is a limiting constraint to the social, economic and political prosperity of the city. Kabokweni Township community of Mbombela is faced with serious social, economic and political challenges up to now despite its recent political promises of providing all households with minimum sanitation facilities by 2010, as informed and guided by The Development Facilitation Act 1995 (Act 67 of 1995) (Integrated Development Plan, Mbombela Local Municipality, Volume 1, 2002-2006; Machethe, 2010). Because of Social, political and economic background, City of Mbombela Municipality became part of Umjindi Municipality in Mpumalanga with the aim of resolving the challenges brought about by the constant drought and poor water service delivery (Machethe, 2010). Although effective implementation of the WDM is currently affected by water pumping pressure as one of the identified challenges from the main sources, communities are reported to be in social upheaval (Machethe, 2010). The most affected area include the Nsikazi South Water Scheme problems which is supposed to supply Pienaar, Kabokweni, Hlau hlau, Kanyamazane and Gutshwa, including Themba Hospital (Integrated Development Plan, Mbombela Local Municipality, Volume 1, 2002-2006; Machethe, 2010). Although Long term water projects are eventually expected to supply additional 20 megalitres of water to the community per day, the community still needs urgent solution to their problems not unless they are actively involved to be part of the projects (Integrated Development Plan, Mbombela Local Municipality, Volume 1, 2002-2006; Machethe, 2010). In the context of this study, it is not a question of researchers only listing and specifying challenges but to find better strategies of making the affected communities be part of the WDM in identifying the challenges, make a needs analysis and come up with better solutions to promote socio-economic development, hence the adoption of the participatory development strategies theoretical framework implementation with special reference to Kabokweni Township. This is the reason why this study investigated both the water scarcity challenges and how they impact the socio-economic status of the community before examining possible intervention strategies.

Cape Town WC/WDM strategy Final Draft (2007) and Smith (2009) identify water leakages, water regulations and water conservation as comprising of some of the important aspects of water demand management. Given a situation where such aspects are effectively managed, research indicates a positive impact regarding socio-economic and political stability (Meyer (2007: 32). For instance, Corcoran et al., (2010:16) and DSS (2010) strongly stress that water is the source of life, the most precious and important of all natural resources, without which the human species cannot survive (DSS, 2010). Moreover, access to safe water is a human right (Corcoran et al., 2010:16). Moreover, enough clean water supplies reduce water borne diseases (Corcoran et al., 2010:16, DSS 2010; Bellettin et al., 2005:4). In other words, there is need for sufficient and safe water that is not only physically accessible but also affordable for personal and domestic uses (Bellettin et al., 2005:4). The Healthy bodies are productive economically and socially. This is the reason why most research associate effective WDM with a

positive impact on community livelihood and successful projects, crop yields associated with agricultural produce and general development of every aspect of human life (Machethe, 2010; Gibson, 2010; Cape Town WC/WDM strategy (Final Draft, 2007; Smith, 2009). From a controversial point of view, the implication is that if there are poor WDM strategies, there is a negative impact on socio-economic development. In the context of, Kabokwei Township of the City of Mbombela Municipality, there is evidence according to research that thorough research should be made on the wide range of issues impacting the effective provision and management of water and sanitation (Mbombela Local Municipality, Volume 1, 2002-2006; Machethe, 2010). There has increasingly been incidence of demonstrations and strikes for lack of water-delivery services (Mbombela Local Municipality, Volume 1, 2002-2006; Machethe, 2010).

The Impact of the WDM Strategy on Economic and Social Development in Kabokweni Township

As highlighted in the previous sections, water is an essential natural resource to sustain human life economically and socially (Blignaut & Heerden, 2012). Contrary, lack of water can pose a major obstacle to social and economic prosperity. In Kabokweni for instance, there are agricultural industries including the mines that have been affected by recent drought, just like other parts of South Africa (Jones & Muller, 2016). Agricultural activities have been adversely affected resulting in a negative impact on agricultural produce (Blignaut & Heerden, 2012; Machethe, 2010; Gibson, 2010). Apart from the fact that agriculture provides us with daily subsistence, agriculture also creates employment opportunities for unskilled work force with the purpose of also reducing poverty as there is means of income (Ozturk, 2015). Apart from the drought, water supply in Kabokweni Township of Mbombala Municipality has always been limited and unevenly distributed (Machethe, 2010; Gibson, 2010). As a result, there has always been a negative impact not only on agricultural produce but sanitation and provision of health bodies and healthy environments as well (Blignaut & Heerden, 2012). A lot of research has been carried out on the impact of unhealthy environments and unhealthy bodies (Ozturk, 2015; Blignaut & Heerden, 2012). Findings are that an unhealthy body becomes unproductive both economically and socially (Ozturk, 2015; Blignaut & Heerden, 2012). Research has also indicated that it very difficult to keep families healthy, workers in regular employment status and children in school when they are affected by water-related diseases. In support to this view, Gulati, Jacobs, Jooste, Naidoo and Fakir (2013) mention that there is a close relationship between water, hygiene and health.

In Kabokweni Township, Shortage of water has also affected daily operations of business experiencing closure (Gandure, Walker & Botha, 2013). Literature also indicates that the water shortage has also impacted negatively on domestic chores such as laundry, drinking cooking as well as sewerage system. It is noted that a lack of clean water totally disrupts the daily household obligations (Gandure, Walker & Botha, 2013). This is particularly true in low-income communities where individuals often don't have the disposable income to buy bottled water. It has also been

realised that water scarcity forces prices of food to go up, which in turn affects the poor families in the society (Araujo, Abiodun & Crespo, 2016; Gandure, Walker & Botha, 2013).

Machethe, 2011, Akinboade, Mokwena, & Kinfack, 2014 noted that since the beginning of 2014, police revealed that Gauteng alone had experienced more than 500 protests, of which over 100 had turned including Kabokwei Township is one. Although the reasons for the protests either violent or non-violent are attributed to the failure of service delivery (Akinboade, Mokwena, & Kinfack, 2014), one must not forget that forms of communication also contribute to such chaotic conditions more particularly if it's a top-down channel (Streeten, 1979). A thorough evaluation of WDM strategies applied in different South African provinces indicate that poor service delivery of housing, electricity, water and sanitation topped the grievances in various communities (Akinboade, Mokwena, & Kinfack, 2014). There is evidence already that the economy is already affected by lack of enough clean water supplies (Akinboade, Mokwena, & Kinfack, 2014). As already highlighted, agricultural production, health status of communities, commercial activities including manufacturing capacity among other aspects are negatively affected if the WDM strategies are dysfunctional (Araujo, Abiodun & Crespo, 2016). It is therefore not only about agriculture, the health and the industrial operations that this research is entitled to focus regarding water the WDM challenges but also the affected peoples' emotions, the frustrations, the stress and their reactions to such emotions with regards to social and economic development.

The Impact of WDM on Political Stability and Development in Kabokweni Township

Dealing with issues related to WDM cannot be separated from the country's political background. From a critical point of view, other researchers argue that there is a close association between government's inability to supply adequate amounts of safe water to communities and potential political conflict and instability (Jankielsohn, 2012). Water shortages has been discovered to normally result in political conflict and aggressive competition even violence in South Africa including Kabokweni Township (Jankielsohn, 2012, Akinboade, Mokwena, & Kinfack, 2014). If this is not available, then the resulting water shortages required to sustain communities will become a growing source of political havoc, social unrest and unavoidable conflict (Jankielsohn, 2012). Research indicates that poor WDM strategies within the government results in ongoing individual and societal conflicts and clashes because of failure to deliver their service delivery promises and also unfair allocation of water resources (Jankielsohn, 2012; Gandure, Walker & Botha, 2013). The greater the scarcity of a resource, the more intense the conflict surrounding its division in society (Jankielsohn, 2012). In this respect, Jankielsohn (2012) finds out that water, as a scarce resource, has great potential to be a cause of further conflict and violence. The implication from literature analysis is that the political agenda to fulfil the needs of the community from a WDM point of view must be met to avoid residence. It must still be remembered from the previous discussions that resistance is a reaction to accumulated emotions and

attitudes. Having discussed WDM from socio-economic and political perspective, the following section critically deals with theoretical and practical WDM water delivery innovative strategies for social, economic and political strategies development in the context of Kabokweni.

Application of the Participatory Development Theoretical Framework As A Possible Wdm Implementation Strategy

It is well understood that policies and implementation strategies for addressing WMD challenges are still unrealistic in South Africa. No research has ever attempted to apply the participatory development theoretical framework as aligned to WDM implementation strategies. As highlighted earlier on, it is assumed that when the community participates in implementation and evaluation of WDM projects and policies, they feel highly empowered and motivated to be part of the challenges in order to draft amicable solutions. They are in a position to identify water supply related problems that may directly or indirectly affect their socio-economic lives. They are also in a position to discuss on problem solving, as well as planning activities which they will jointly carry out as a community. The participatory related developmental theories have replaced the traditional approaches which were prescriptive in terms implementing service delivery policies without input of the victims of the challenges (The community). This was associated with a lot of resistance and rebellious behaviours among the community (Brodie, 2009; International Institute for Environment and Development (IIED) 2010:13).

Research Design

The exploratory research design has been found suitable to in this study focussing on investigating what is currently happening and what has happened in the Water Demand Management on Social, Economic and Political Development and Stability of Kabokweni Municipality with the aim of resolving socio, economic challenges encountered. This is based on the view that the exploratory research design allows the researcher conducts an in-depth search of the literature and conducted interviews (Saunders, Lewis, & Thornhill, 2007).

Sampling

Population and sampling

In this study, purposive sampling method was used taking into consideration factors such exposure to water scarcity problems as well as experience in water related projects. The population comprised of 8 purposefully selected people from the community of Kabokweni township with 2 councillors out of four as ward leaders, 2 out of 4 as WDM officials from the City of Mbombela and 4 community leaders.

Data Collection

Data Collection Instruments

In order to collect information of the perceptions of the Kabokweni community on the impact of the WDM on socio-economic and political development and stability, this study used unstructured interviews. This is based on the views, opinions and ideas of the Kabokweni community on identifying impact of WDM and also on how to tackle the

water scarcity challenges. The reason of using this method is because it is easy to follow, not restricting or limiting anyone to the interview in accordance to the interview guide (Kumar, 2014). It is also noted that unstructured interviews allow the interviewer enough time to probe and clarify questions without giving clues to the answers. List of questions in this study were prepared well in advance and participants were of all the interview procedures without violating the ethical considerations.

Data Analysis

Interviews

Thematic analysis was applied during problem framing, and according to Braun and Clarke (2006:2) thematic analysis is a process for “encoding qualitative information.” thematic analysis helps researchers move from a broad reading of the data toward discovering patterns and framing a specific research question. Applied. By using thematic analysis to distil data, researchers determine broad patterns that will allow them to conduct more granular research and analysis (Braun & Clarke 2006:2). In this research, themes emerged from the data that was gathered and were not imposed or predetermined by the researcher. From the description mentioned above the researcher used the thematic analysis in encoding the information.

Validity and Reliability

This study relied on a pilot study that was carried for validity and reliability.

According to Van Teijlingen and Hundley (2001:1) a pilot study is a mini-version of a full-scale study or a trial run done in preparation of the complete study. The latter is also called a ‘feasibility’ study. It can also be a specific pre-testing of research instruments, including questionnaires or interview schedules. They further argue that a pilot study will thus follow after the researcher has a clear vision of the research topic and questions, the techniques and methods, which will be applied, and what the research schedule will look like. During this process, the respondents will be interviewed on the shortage of water at Kabokweni Township. In the context of this study, the policy study consisted of only 4 respondents who were interviewed to test for validity and reliability.

Elimination of Bias

In an attempt to eliminate bias, the researcher had to ensure that respondent was guarded against any form of discrimination in the form of racism, ethnicity, language, socio-economic status, gender, religion, and language.

Ethical Considerations

The researcher ensured that participants were not subjected to harm in any ways whatsoever as stressed by Akaranga, S.I. and Makauargue, B.K. (2016: 3-7) and respect for the dignity of research participants should be prioritized. Full consent will be obtained from the participants prior to the study. The protection of the privacy of research participants will be ensured. Adequate level of confidentiality of the research data will be ensured.

It is further stressed by Akaranga, S.I. and Makauargue, B.K. (2016: 3-7) that anonymity of individuals and organizations participating in the research has to be ensured. Any deception or exaggeration about the aims and objectives of the research must be avoided. Affiliations in any forms, sources of funding, as well as any possible conflicts of interests have to be declared. Any type of communication in this research was done in relation to the research with honesty and transparency. Any type of misleading information, as well as representation of primary data findings in a biased way was avoided.

3. Results, Discussion and Interpretation of Findings

Introduction

In this chapter, discussions from interviews were conducted, analysed and interpreted to come up with research findings to the findings of the researcher, the discussions and interpretation of the results. Informed by the interviews which were based on open-ended questions to the participants, the results, discussion and interpretation is categorised under three main areas that seek to address the research objectives regarding the impact of WDM policies as a way of addressing socio-economic challenges experienced by the Mbombela community

The impact of the WDM strategy on economic- social development and stability in Kabokweni Township of the City of Mbombela.

When asked to share views regarding their knowledge and understanding of the WDM, the respondent demonstrated a fair understanding of the Water Demand and Management regarding policies and roles. This was supported by the following comments:

Participant A.: *Yes, I know that very well that there is a high demand of water in our township that must be managed well so that everyone gets enough water.*

Participant B. (Community leader): *we have water resources that supply us with water. There is also need to control and monitor water so that it is not wasted. If you move around, there are taps leaking around resulting in water wastage. Water demand management is all about the municipality to manage our water resources so that there is efficient water delivery sources.*

C.: *Water demand management is all about guiding and controlling out supplies of water including monitoring policies to do with sanitation.*

D. (WDM employee) *WDM is a policy whose aim is to address water challenges that may affect the community as well as enhancing water delivery services.*

The above responses also gave confidence to the researcher on the success of the study for consulting interview candidates who were in a position to respond to the interview taking into consideration their level of understanding and practice of WDM principles and practices. This view is supported by Lincoln & Guba (2000)

who claims that purposive sampling method takes into consideration knowledge and understanding as well as the experience of the respondents in the field of the environment under study. The following are the emerging themes from the above comments: managing, controlling, guiding, enhance. Literature associates such type of words with somebody who is giving directives and instructions to someone who just have to comply without a chance of giving input (Brodie, 2009). The same author regards this to be against the human development theorist who believe in sharing and participation of roles. However, in the context of WDM implementation initiatives, to effectively manage water delivery services. The responses however left the researcher with an inquisitive mind as to why there are still challenges of implementation of WDM policies considering the knowledge and understanding displayed on the day of the interview regarding WDM principles. However, analysing of the themes such as control, monitoring, and guiding, managing leaves one wondering if the activities were conducted in a democratic or prescriptive manner. In other words, was community involvement considered or not during WDM implementation? Resistance is assumed the order of the day where the aspect of total involvement is not applied in any form of human interaction.

Impact of WDM on the on socio-economic development and stability in Kabokweni Township of Mbombela

When asked to share their perceptions on the impact of the WDM strategy on economic-social development and stability, the following were the emerging themes from the respondents: poor sanitation. Unemployment, poor healthy, poverty, financial challenges, in-equality, Illegal connections, poor domestic water supply services: Regarding these themes, the following selected comments were recorded:

Participant E:

We must understand sanitation strategy does not only involve the toilets that we don't have. It's also about our human rights regarding maintaining health and hygienic conditions. Here there is sanity it means things are going well. In respect to our valuable resource, water, a status of healthy bodies and health environments, is maintained when clean water is adequately supplied and managed to meet the demand of the community. Where water is scarce and inadequately supplied, people's health conditions are adversely affected.

In addition to the above comment, Mr.G, a community leader has this to say:

When I have realised that clean and enough water brings good sanitation. Just look the way we are suffering in this community. Children are sick. Many people are no longer able to work for themselves because they don't have enough water to drink and cook. This is the reason why our community is no longer happy. Just count how many are dying in hospitals because of lack of water. You can see that our social economic, political, educational, financial and environmental conditions are now very poor. How can you survive without money in your pockets? How can children go to school when they are sick and we don't have money for their fees? All our crops have dried up. We don't have

toilets. These politicians give us lies. The government is full of crooks. There is poor management in the water delivery services.

The above comments clearly indicate that there are poor supplies of clean water which has resulted in poor sanitation, poor health, poverty, unemployment, poor financial conditions and in the township of Kabokweni. The implication is that there is a negative associated between poor WDM and sanitation, health, employment, finance, domestic stability and education as related to socio-economic development and stability as characterised by the city of Kabokweni (Machethe, 2010; Gibson, 2010).

It also came to the attention of the researcher that such formal and informal activities as agricultural, small business enterprises e.g. Hair dressing, tuck-shops, electrical appliance shops and vending are some of the means of survival in terms of employment and income which all entirely rely on water in Kabokweni township selling of icy products and other small business related activities are some of the sources of employment for rely on enough provision of clean water. This is supported by the following selected comments (Mbombela Municipality, Volume 1, 2002-2006; Machethe, 2010).

Participant G: (Community leader) has this to say:

Because of the drought, the local municipality has not managed well the current water sources to revive our agricultural activities that has been providing us with income for our survival" "The drought and the scarce water has resulted in many agricultural crops drying."

Participant H: *I have also observed that most local shops are closing down. Most people no longer have money to buy. Hair salons rely on water. Brick moulding rely on water. Everything rely on water. What should we do now?*

Analysis of the above comments indicate that most of the respondents particularly represented by community leaders were able to observe the community experiences on a daily basis. It is however not beyond anyone's control when natural disasters happen. However, analysis of the responses in terms of given comments indicate that local communities still shoulder the blame on the WDM team leaders on the failures. The implication is that proper strategies should be in place well in advance before such disaster happen.

In responding to the question of the impact of WDM on socio-economic development and stability, the ward leaders had this to say:

Participant E.:

Yes, we do understand that whenever there are challenges of water scarcity, the local communities blame us for failing to effectively implement WDM policies. We also understand that access to clean water and sanitation is a human right. However, the members of the community seem to forget that they also contribute to such challenges by putting illegal water connection that waste a lot of waters. Sometime you find their taps leaking without reporting or fixing them.

Participant C. (Ward leader): *Some of these challenges are beyond our control. For instance, we have water pumping problems with the Rand Water project from the Crocodile River whereby excessive sand is blocking water pipelines resulting in insufficient water supply to meet the demand. The community fails to understand that such type of projects takes a long time to fulfil such a demand.*

Analysis of the above comments indicate that the ward leaders are aware that access to clean water and sanitation is a human right. What is also interesting to note is that they are other technical challenges that they are also faced with regarding efficiency in pumping of water. They also acknowledge that the community also contribute to the challenges in one way or the other as articulated with respondent C above.

The implication is that there is a conflict between the ward leaders, WDM leaders and the members of Kabokweni Township community. There is also an indication that there is no proper communication between the community, the ward leaders and WDM employees. Results of the analysis also indicate that there is no full participation of the community in the planning and the implementation of WDM strategies. Literature confirms that when the community participates in implementation and evaluation of WDM projects and policies, they feel highly empowered (Brodie, 2009; IIED, 2010:13).

When asked to comment on the reactions of that communities to lack of WDM implementation skills, WDM employees indicated that their responses to the impact was characterised by emotional reactions characterised by violence, destruction of property such as roads, libraries, shops, clinics, schools and houses. Distracting transport movement by blocking roads and free movement of people. Burning tires and causing air pollution is the business of the day. The following selected comments reflect the findings:

Participant F. (WDM employee) gives the following comment:

The residents reacted violently to water crisis. They believe in emotional reactions in such crisis which to me impact negatively any form of human development. They often protest in an unworthy manner expressing their anger, frustration and show rowdy behaviours related to water scarcity. Such types of behaviour totally disrupts the peoples' normal social and economic lives. One could still wonder if there is any logic in destroying a school where your child need to learn. Destroying the clinic where you need medication tomorrow. What about the library where your children need to consult reading sources for assignments and homework? Is that not worsening the situation? Also think of the pollution and healthy when you burn and inhale the smoke from tyres.

In support of the above comment, D. (MDM employee) says:

I have seen on many occasions' residents of Kabokweni blocking roads, destroying infrastructure that they also want to use tomorrow and throwing stones to people and moving vehicles. They shout .and even attack innocent people. They lack tolerance, lack patients and non-innovative when they

are angry. On many occasions they come to attack our offices. However, we have embarked on projects that need one to be patient since the implementation is done in phases.

Analysis of the responses indicate that this type of reaction had a very bad impact on socio-economic developments for there was a lot of destruction done as a result of such bad emotions as frustration, anger, bitterness and stress. The implication is that where WDM policies are effectively implemented, there is a positive impact on the socio-economic status development and stability. Contrary, where there is Lack of proper WDM strategies there are emotional aspects associated with a destructive mentality as experienced by Kabokweni Township in Mbombela. This being the case, it is important to note that politics always move hand in hand with WDM. In view of this, the following discussion and findings is related to WMD in terms of political agendas. There is still need for one to ask if proper communication and community involvement would not have been a better strategy by the WMD employees and the ward leaders to avoid such type of destructive ideas. The following comment is worthy analysing to come up with the answer.

Participant G.

You will find that the community just receives instructions, we are never involved in the water projects. We don't even know what is taking place. We are very prepared to assist where ever possible. This is our city and we need to contribute in development.

The above comment clearly reflects the reason why the residents sometimes over reacted. The implication is that they are not recognised as part and parcel of the community development projects so as to boost their social and economic lives. That is the reason why they end up making such destructions which have serious effects for human livelihood. If there is proper consultation and involvement by the top officials, such type of reactions could be avoided. According to literature, The participatory related developmental theories have replaced the traditional approaches which were prescriptive in terms implementing service delivery policies without input of the victims of the challenges (The community) (Brodie 2009; International Institute for Environment and Development (IIED, 2010:13). This was associated with a lot of resistance and rebellious behaviours among members of the community (Brodie 2009; International Institute for Environment and Development (IIED, 2010:13).

Impact of WDM on political development and stability in Kabokweni Township of City of Mbombela

Political issues cannot be separated from socio-economic issues. One will still find that the respondents refer to Ward leaders and WDM employees as politicians working for the government. When asked to share their perceptions on the impact of WDM on political development and stability, to the respondents indicated that they were fed up of fake promises from the politicians in connection with speeding up projects geared towards effective implementation of WDM strategies. The following themes emerged from the comments with special reference to the community leaders: Liars, crooks, corruption, dictators, empty promises,

Participant F had this to say:

After observing what happened in Kabokweni Township the angry protesters, accused the City of Mbombela officials and politicians of delaying the processes to finishing laying the new pipes because they are crooks who are only into corruptive activities and benefiting water supply projects that was put out on tender for their own benefit.

Participant B in addition to the above comments expresses the feelings as follows:

They give us empty promises with full of lies. Five months ago, they visited our community and promised to buy us water every month. Those make empty promises that never materialised. This is the reason why you see us mobilising each other and protesting angrily. Instead of them bringing the promised clean water, you see them bringing police men with rubber bullets who end up shooting a hungry innocent soul. I will never vote for them again.

Analysis of the above comments is an indication that all the results that politicians sometimes contribute to political conflicts and social and economic instability by making promises that they don't fulfil. As indicated by the findings of the study, the identified emotional behaviours of the residents is sometimes associated with expressing their frustrations for lack of political support. The findings clearly indicate a strong impact of protesting behaviour characterised by resistance and destruction to have a strong impact on political development and stability of Kabokweni Township.

Application of the participatory development theoretical framework as a possible WDM innovative implementation strategy.

When they were asked to give their perceptions on the application of the participatory developmental theoretical philosophy during the WDM implementation process, the following themes emerged: Total involvement, empowerment, full participation, democratic approaches, motivation, commitment, peace, happiness, economic stability, social stability and political stability.

Participant G:

It is well understood that policies are planned and processed by the Kabokweni Township WDM policies designed by the municipality officials, in the first place they don't involve the community in that process. I must be able to implement something that I am not part off.

Participant A: *with me, I feel highly motivated by implementing policies that that I am part of. I feel empowered and motivated if this is done in a democratic manner.*

According to H:

If there is total involvement of the community and open communication in a democratic way, we become part of the challenges so that we are able to solve these water problems together with the WDM team without any resistance or

protesting. That is the only way to bring peace and happiness in our community.

I understand that that polices come from above but we always consult and educate the community even through media on better ways to handle water related issues.

Participant B.

We are only given pamphlets prescribing us of what to do without proper consulting to give our own ideas. With me, I can fix all those pipes without any payment if they give me an opportunity. All the leaks I can handle. There are many of us in the community with the skills. Given this opportunity, you will see that our community will develop socially, economically and socially.

Analysis of the above comments indicate the participatory development theoretical framework is a suitable innovative strategy for socio-economic stability Kabokweni Township in Mbombela. The respondents were in favour of its application to try and solve WDM challenges in Kabokweni Township in Mbombela. According to literature, community development is the process of assisting a community to reinforce itself as well as progress towards its full potential (Brodie, 2009; IIED, 2010:13). The implication is that in order to solve WDM challenges, all policies must suite this theoretical perspective in order to restore sanity in all aspects of the human livelihood.

Summary of findings

The findings of this study from all of the above discussions, analysis and interpretations established that:

- The WDM strategy has challenges some of which instigated emotional reactions among community members linked to a negative impact on economic- social development and stability in Kabokweni Township of Mbombela as a result of lack of community involving in planning, designing and formulating implementation strategies in a collaborative way.
- The WDM implementation gave a platform for political motives and campaigning by way of giving false promises based on provision of water and sanitation. This move also caused emotional reactions among community members linked to a negative impact on economic- social development and stability in Kabokweni Township of Mbombela.
- Participatory development theoretical framework is a suitable innovative strategy for implementing the WDM policies for socio-economic development and stability in Kabokweni Township in Mbombela.

4. Conclusions and Recommendations

The previous sections gave the basis of answering the research question by setting background to the study including aims and objectives, significance of the study and methodology. Literature analysing critically reflected global, national and local perceptions on the impact of WDM on socio-economic and political development and stability before relating to Kabokweni Township of Mbombela. From literature analysis, it emerged that implementation of WDM in the South African context with special reference to

Kabokweni township was experiencing challenges that impacted the social, economic and political stability of the country. However, more research was necessary to justify the literature review findings to so as to elaborate and make constructive contribution to the literature gaps on the water delivery services and sanitation. The research methodology applied made it possible to establish primary findings of this study. Considering all this link and coherence of every section, this study concludes by stating that there is a negative impact of impact of WDM on social, economic and political development of Kabokweni community residence?

4.1 Recommendations

In line with the study and its theoretical framework including the results of the literature review and the interpretations and analysis of the interview results, the following are proposed recommendations in the context of this study:

Ward leaders (councillors) of the City of Mbombela, the employee of the City of Mbombela who deals with water on that region and the community leaders of Kabokweni establishing and conducting joint workshops which:

- Engage the majority of community members in designing and implementation process of needs analysis concerning water delivery challenges that affect the whole community.
- Engage majority of community members in planning local WDM policies by integrating the outcome of the needs analysis policies.
- Engage the members of the community in WDM policy designing, policy innovation and policy implementation. This will ensure sanitation in the respects of economy, social and political aspects of human development.
- Ensuring that educational sessions and water awareness programmes that calls for sanitation, health, domestic usage of water and other important aspects of human livelihood involve majority of community members for support.
- Indoctrinate the philosophy of total community involvement in water project

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