

# The perceptions of municipal water service officials on the Blue Drop Certification Programme

## The case of Nkangala District Municipality

E J Nealer

School for Social and Government Studies  
North-West University (Potchefstroom Campus)

D Mtsweni

Pretoria

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### ABSTRACT

The Blue Drop Certification Programme was introduced in 2008 by the Department of Water Affairs and Forestry (DWAF) with the aim of maintaining and improving drinking water quality in the Republic of South Africa. The Programme involves a compulsory annual assessment of water services authorities' management and service rendering of the potable water supply in their respective geographical areas of responsibility.

It is against this background that the authors undertook a mixed data collection methodology research venture to determine how the officials of these authorities (municipalities) perceive the Programme. The research brought to light the following core findings (albeit perceptions):

- The Blue Drop Certification Programme has the support of the majority of municipal officials who participated in the research.
- Municipal officials involved with the assessment programme experienced it as an inspiration for improved performance.
- There is a lack or poor understanding of the water sector's legal framework including the Blue Drop Certification Programme's assessment criteria by some participating municipal employees.
- There is a lack of managerial and political leadership involvement and support for the water services functions in municipal areas.

## INTRODUCTION

South Africa has introduced new legislation and policies governing water supply and sanitation services since the advent of democracy in 1994. This was done to ensure equitable access to water resources and water supply. The change in government came with its own challenges, such as the capacity of local government to provide water services efficiently.

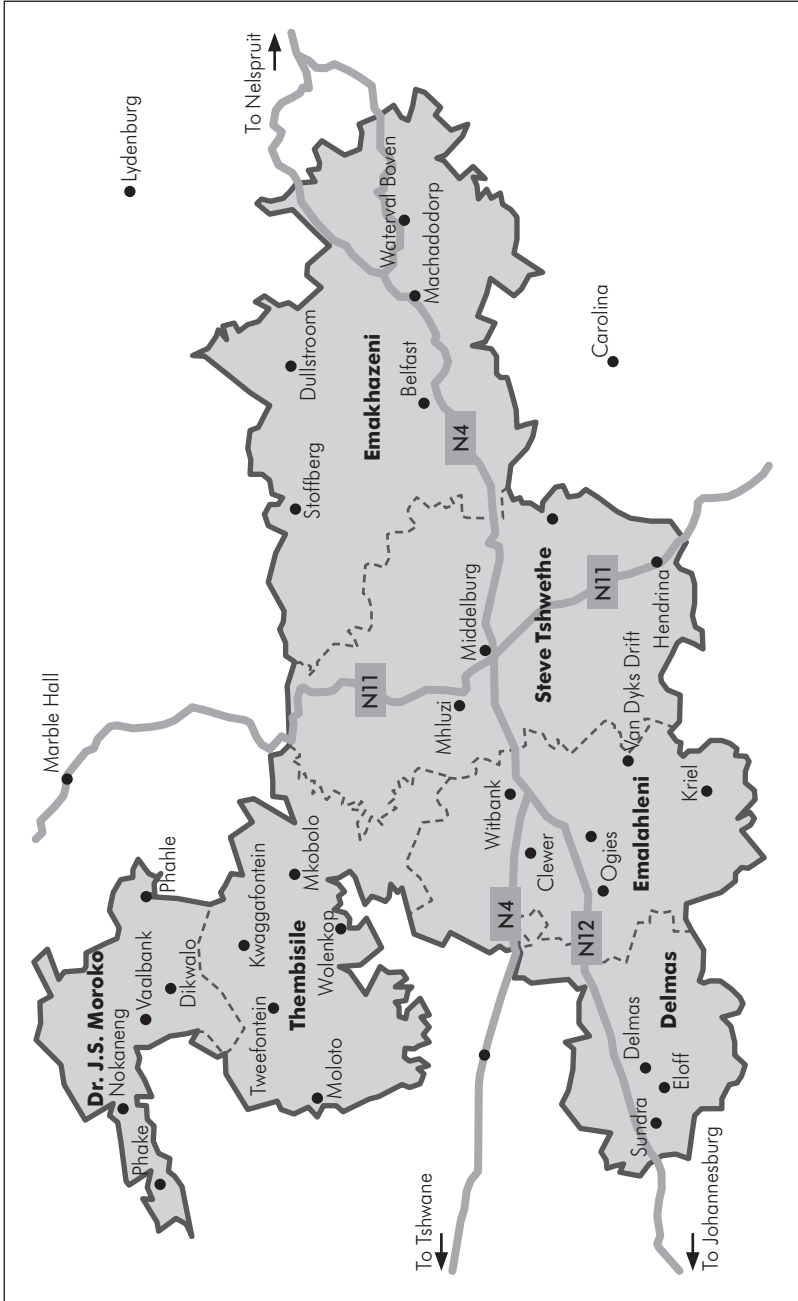
Thus, for example, the *Constitution of the Republic of South Africa, 1996* places the responsibility for water and sanitation provision on local government with its public policy implementation institutions (RSA 1996: Part B of Schedule 4). A Water Service Authority (WSA) refers to a municipality or local authority that has executive authority for water services in the area under its jurisdiction (Tissington, Dettmann, Langford, Dugard & Conteh 2008: Online). A WSA is responsible for ensuring that its community has access to water and sanitation services. WSAs must also ensure that water provision in their area of jurisdiction conforms to national norms and standards (DWA 2003:51).

The Department of Water Affairs (DWA) is the water sector leader and the custodian of all South Africa's water resources. It is also the regulator, which guides and coordinates the support to water service institutions, and is responsible for the development of public policy.

In order to maintain and improve drinking water quality in South Africa and to ensure that public trust in the country's tap water is restored, the Blue Drop Certification Programme (hereafter referred to as Blue Drop Programme) was introduced on 11 September 2008 by the DWA as an incentive-based regulation. According to the DWA (2010:1), "The Department of Water Affairs initiated the drinking water quality regulation programme in 2005 with the objective of ensuring the improvement of tap water quality by means of compliance monitoring". According to the DWA (2005:12), "The SANS 241 Drinking Water Quality Specification is the definitive reference on acceptable limits for drinking water quality parameters in South Africa; and it provides a guideline level for a range of water quality characteristics". According to the DWA (2005:4), research shows that usually the major problems with poor quality drinking water occur most frequently in rural areas and small towns. Various reasons for the failure to comply with drinking water regulations include: insufficient or untrained staff, poor management, budgetary constraints, poor operations and poor maintenance of inadequate infrastructure.

In this article the background to the implementation of DWA's Blue Drop Programme on the management of water quality will be sketched after which the problem statement, research objectives, some of the major findings and analyses of them, and lastly recommendations about the way forward in potable water quality management will be presented.

# Layout of the Nkangala District Municipality



Source: Nkangala District Municipality 2011: Online.

## **LOCUS AND PROBLEM STATEMENT OF RESEARCH**

The proposed study was conducted in six local municipalities under the jurisdiction of the Nkangala District Municipality in Mpumalanga Province. They are: Steve Tshwete, Emakhazeni, Emalahleni, Victor Khanye (formerly Delmas Local Municipality), Thembisile Hani and Dr J.S. Moroka. See Figure 1 for a locality map of the District:

The Steve Tshwete and Dr J.S. Moroka Local Municipalities obtained Blue Drop Programme certificates during the 2010 assessments. The Emalahleni and the Thembisile local municipalities obtained a very low Blue Drop Certification Programme score of 29,7% and 37% respectively. The Emakhazeni Local Municipality showed an improvement from its 2009 average score of 58,5% to 71,2% in the 2010 Blue Drop Certification Programme assessments (DWA 2010:155). The Victor Khanye (Delmas) Local Municipality was one of the four Mpumalanga Municipalities which chose not to be assessed during the 2010 Blue Drop Certification Programme assessments (DWA 2010:4).

By 2010, the number of participating WSAs and water supply systems has not yet reached 100%. A vast number of municipalities have chosen not to be assessed. Four of those WSAs which chose not to respond to the call to be assessed were to be found in Mpumalanga Province. The poor commitment shown by the Mpumalanga Province WSAs which were not assessed left the Department concerned about the management of their drinking water and its quality (DWA 2010:4).

The research problem that this study sought to address was to determine the perceptions of water service employees in municipalities on the Blue Drop Certification Programme (an incentive-based regulation) and to suggest recommendations for ensuring maximum participation in this programme.

## **RESEARCH OBJECTIVES**

The primary objective of the study was to determine and describe the perceptions of municipalities' employees, such as technical and/or water service managers and process controllers of the DWA facilitated implementation of the Blue Drop Certification Programme since its launch on 11 September 2008 – right up to the assessment report of 2011.

The secondary objectives of the study were the following:

- To analyse the theoretical principles of water services, the existing regulating legislation, and drinking water quality regulations.
- To assess if the water service employees in municipalities are familiar with water services policies and legislation, especially the Blue Drop Certification Programme.

- To establish whether water service employees in municipalities are in favour of the implementation of the Blue Drop Certification Programme.
- To present recommendations on how to encourage the participation of water service authorities in the Blue Drop Certification Programme.

## LEGAL FRAMEWORK AND POLICIES

Even though the Constitution formally recognises the right of access to water as a basic human right and the guarantee of a basic water supply, many households in South Africa still do not have access to safe drinking water (Welch 2005:58).

The *Water Services Act* No. 108 of 1997 obtained its mandate from section 27 of the Bill of Rights. Schedule 4(b) of the Constitution places the responsibility for water and sanitation services provision on local government, an independent sphere of government.

The *National Water Act* 36 of 1998 regulates the licensing of raw water abstraction and WSAs in their roles as water users. The return of waste water to a water source is also governed by this piece of legislation.

According to Tissington, Dettman, Langford, Dugard, and Conteh (2008: Online), the *Water Services Act* 108 of 1997 is the main legislation dealing with the accessibility and provision of water services in South Africa. The Act covers both drinking water and sanitation services to households and other water users within municipalities. Water Services Regulations are informed by this legislation under section 71(1). Water services institutions such as water boards and WSAs are also established under this Act. The roles of water services institutions are clarified in this Act. The Act also aims to assist local government to fulfil its role as a water services authority.

The Strategic Framework for Water Services (2003) stipulates targets, and the approaches and guidelines to provide water and sanitation services. The sector vision as stipulated in the Strategic Framework is to ensure adequate, safe, appropriate and affordable water and sanitation services. The Strategic Framework also defines the role of the DWA as the national water sector regulator.

Regulation 2834 is read in conjunction with section 12 A of the *Water Act 54 of 1956*. This water services regulation addresses the employment of personnel (process controllers) in water treatment works. Process controllers are classified according to their qualifications and relevant work experience. The role of process controllers is to purify raw water from the source by engaging in activities such as operating pumps, valves and other related plant machinery (DWAF 1985:section 26).

There are two important local government legislations which have an impact on the provision of water services in municipalities' geographical areas of responsibility. They are the following:

- *Local Government: Municipal Structures Act* No. 117 of 1998 deals with the powers and functions of municipalities, in particular their roles as water services authorities in ensuring water provision in their area of jurisdiction.
- *Local Government: Municipal Systems Act* No. 32 of 2000 distinguishes between the functions of a water services provider and water services authority. The Act regulates provision of services either by the municipality or the appointment of external service providers under section 78. (DWA n.d.:4-5).

In the next section the Blue Drop Certification Programme will be addressed.

## **THE BLUE DROP CERTIFICATION PROGRAMME**

Franceys and Gerlach (2008:23) define regulation as a distinctive form of government intervention aimed at encouraging or discouraging certain types of behaviour by society at large. The regulation process involves the monitoring of actions of regulated institutions in order to ensure compliance with set standards. Drinking water quality serves as a good example of an activity that calls for monitoring on a regular basis (Krause 2009:42–43).

According to Franceys and Gerlach (2008:233–234), “A good legal framework is one that has essential components and that is developed to suit local circumstances (political, social, cultural, physical, environmental and economic). In other words, an effective regulatory framework considers the ‘institutional endowment’ of any country and respects the constitutional context as well as existing administrative capacities”.

Groom, Halpern and Ehrhardt (2006:Online) suggest that governments should first assess whether a particular regulation will achieve the intended objective before its implementation. Tremolet (2006: Online) is of the view that quality regulation should be applied in a flexible way and be adapted to the circumstances of that particular area and the particular customers. Each individual country should develop and implement policies and regulatory models that are appropriate for that particular country. This should be informed by factors such as commitment to regulation and institutional capacity (Eberhard 2007:Online). An effective regulation does not necessarily have to be complex and too detailed, but it should be simple, practical and manageable (Franceys & Gerlach 2008:233).

A regulation is developed with the aim of achieving certain results that are desired by the public in cases where such results are not achieved under normal circumstances (Baldwin & Cave 1999:19). It should be noted that a regulation will not be effective if the necessary political will is lacking and the required social values are not held (Franceys & Gerlach 2008:234).

South Africa has had several drinking water quality failures such as the cholera outbreak in Delmas in the Mpumalanga Province in 2007. Such drinking water quality failures cannot be ignored and also played a role in influencing the implementation of the Blue Drop Certification Programme by DWA.

## **DRINKING WATER QUALITY IN SOUTH AFRICA**

According to Kolanisi (2005:18), “The main idea related to the quality of water is the eradication of impurities and to produce water which is healthy and fit for consumption”. The author identifies three properties of drinking water:

- Microbiological – includes bacteria of water quality.
- Chemicals – such as metals and salts.
- Physical – is visible and can be evaluated through the eyes, smell and taste.

All these properties determine the water quality and whether it is safe for human consumption. Water treatment processes involve the removal of harmful micro-organisms from raw water to ensure that it meets the most important requirement for drinking water, namely that it must be safe to drink (Schutte 2006:3). South African water services providers are expected to supply water that is consistent with regulated standards specified in the Compulsory National Standards for Quality of Potable Water (DWA 2007a:5).

A situation assessment undertaken by DWA pointed out certain drinking water quality challenges mostly in smaller municipalities (DWA 2007a:6). These challenges include lack of adequate human resources, insufficient funding made available for drinking water quality management, lack of knowledge of drinking water quality requirements and inadequate access to credible laboratories.

Tissington *et al.* (2008: Online) are of the view that “Media reports of baby deaths and cholera outbreaks in poor and rural areas speak to the fact that a large proportion of the population does not have adequate access to sufficient clean and safe drinking water and sanitation facilities, and that not enough is being done by local municipalities, water services providers and DWA to address the crisis”. The deaths referred to above happened in the Ukhahlamba District Municipality in the Eastern Cape Province where 80 babies died from allegedly contaminated drinking water (Tissington *et al.* 2008: Online).

Drinking water quality can be successfully managed if there is commitment and support from all those who are involved in the provision of water (DWA 2007a:8). The commitment also involves ensuring that water works employees have the appropriate training and skills to manage and operate water supply systems. The lives of millions of South Africans depend on how WSAs manage drinking water quality (DWA 2007a:47).

Municipalities should ensure transparency in dealing with the management of drinking water quality. This includes providing reliable information about the management of their drinking water quality when required to do so in terms of the *Water Services Act*. The Act makes it an offence to fail or refuse to provide information (MacKintosh, Manxodidi, Wensley & Uys, n.d.: Online).

## **WHY INTRODUCE THE BLUE DROP CERTIFICATION PROGRAMME?**

According to the DWAF (2008a:42), “One of the stated objects of the *Water Services Act* 108 of 1997, is to provide for a regulatory framework for water services institutions and water services intermediaries”. The DWA formulated water services regulations in order to protect consumers from water services providers who might not act in the interest of the public and to ensure that municipalities improve their performance in managing their drinking water quality. The programme will also ensure that credible information about drinking water quality is published for access by the public (DWAF 2005:xv).

The Department acknowledged before the implementation of the Blue Drop Certification Programme that the level of confidence on the part of the public regarding the quality of drinking water in South Africa was not as desired and therefore a need existed for the regulation of drinking water quality management (DWAF 2007a:5). The DWA therefore initiated the Blue Drop Certification Programme as mandated by the *Water Services Act*.

## **HOW THE PROGRAMME IS IMPLEMENTED**

A town achieving the Blue Drop Certification Programme’s water quality assessment certification will receive a token (i.e. flag and award) which will serve as a sign that the drinking water quality in that particular municipal area is of good quality and can be consumed and used with confidence. A municipality should receive a score of 95% and above based on the set criteria to obtain the Blue Drop Certification award status (DWAF 2008b:3). It is also compulsory for all WSAs to take part in the Blue Drop Certification Programme assessments (DWAF 2008b:9).

The assessment of WSAs is done continuously by the DWA Drinking Water Quality Regulation Unit with trained assessors who conduct the assessments nationally. The assessment focuses on each water services system and results are given per system (DWAF 2008b:3). WSAs which achieve the Blue Drop Certification award status are formally acknowledged by the Minister of Water



Affairs (DWAf 2008b:9). The programme's results are communicated to the public on an ongoing basis to ensure that the public is well informed about the status of their drinking water quality.

The DWA does not suddenly stop monitoring drinking water quality once a Blue Drop certification award has been granted to a water services system. A water services system is assessed on an annual basis and, if it qualifies, it then receives a certificate of reconfirmation of the Blue Drop award status. The Minister of Water and Environmental Affairs will withdraw the Blue Drop Certification award status of a particular system if there is a decline in drinking water quality compliance. However, the Blue Drop Certification award status is not taken away due to a single drinking water failure but will depend mainly on the WSA's annual compliance with drinking water quality standards as set out in the SANS 241 (DWAf 2008b:10). If municipalities fail to achieve the Blue Drop Certification award status, it does not necessarily mean they do not comply with drinking water quality standards (The Water Wheel 2009:22).

## **PROGRESS SINCE THE INTRODUCTION OF THE BLUE DROP CERTIFICATION PROGRAMME**

The DWA (2010:1) noted that there has been a huge improvement by WSAs in the way they manage their drinking water quality since the implementation of the Blue Drop Certification Programme. In the second year of the implementation of the programme, the number of drinking water systems that were assessed increased by almost double the number of systems assessed during the first year in 2009. During the same period there was an increase in the number of water services systems that received the Blue Drop Certification awards.

The number of municipalities assessed increased from 107 in 2009 to 162 in 2011 and water supply systems from 402 in 2009 to 914 in 2011. The National Blue Drop Certification Programme's average score improved from 51,4% in 2009 to 72,9% in 2011. The general performance trends showed an improvement in all the performance categories. The DWA (2009:3) states that "This serves as an indication that the introduction of this incentive-based regulation approach stimulated renewed energy in the sector towards compliance". The DWA was impressed with the way WSAs responded to the first year of the implementation of the Blue Drop Certification Programme.

According to the DWA (2011:193), all municipalities (100%) were assessed in Mpumalanga Province during the 2011 Blue Drop Certification Programme's assessment cycle and the province managed to receive eight Blue Drop Certification awards compared with only three certificates in 2009. The Steve

Tshwete Local Municipality was the best performer in the province during the 2011 Blue Drop Certification Programme's assessments, achieving a Blue Drop Certification Programme score of 96,60% (DWA 2011:191). It is also important to note that the lowest Blue Drop Certification Programme score in the province was obtained by the Mkhondo Local Municipality with a score of 5,05% (DWA 2011:214).

## **CRITIQUE OF THE BLUE DROP CERTIFICATION PROGRAMME**

Tissington *et al.* (2008:Online) are of the opinion that the Blue Drop Certification Programme will be biased in favour of well-performing municipalities and assure rich water consumers about their drinking water quality. On the other hand, municipalities that are not performing well will be named and shamed irrespective of the reasons behind their poor performance and non-compliance with set drinking water quality standards.

The aforementioned authors' criticisms are unfounded since up till now the Blue Drop Certification Programme has not negatively criticised or embarrassed under-performing municipalities. Instead, the DWA has worked closely with them to ensure that they improve performance. The authors also question how municipalities which are facing staffing challenges such as lack of technicians are expected to manage their drinking water quality effectively and efficiently.

It is unfair to compare the performance of larger metropolitan areas and smaller and poorer municipalities. Many smaller municipalities, which seldom have the capacity to purify their water, are responsible for treatment of their drinking water as compared with larger metropolitan areas that contract water boards to purify their drinking water. The quality of the raw water in a particular area is also a challenge since some sources such as the Hartebeespoort Dam are heavily polluted and others are comparatively less polluted. The Blue Drop Certification Programme should therefore not overlook the quality of raw water in a particular municipal area (Water Rhapsody 2010: Online).

## **OPTIMISTIC VIEWS ON THE BLUE DROP CERTIFICATION PROGRAMME**

Tissington *et al.* (2008: Online) hope that the Blue Drop Certification Programme as an incentive-based regulation becomes a success, especially with the DWA assuming its role as a national regulator of water services. The

authors consider this programme as a good start for an effective drinking water quality enforcement system.

Tremolet (2006: Online) summarised the importance of the South African drinking water quality regulations as follows:

- They promote transparency since communities will now have access to information about their drinking water quality.
- The regulations will also induce municipalities to work towards complying with drinking water quality standards, especially those which have had difficulty in complying before.

According to the DWA (n.d.:1–5), the Blue Drop Certification Programme has resulted in improved management of drinking water quality in South Africa. The following improvements among others were singled out by the Department:

- There has been an improvement in micro-biological and chemical compliance in 2010 as compared with the 2009 results.
- The programme has also compelled decision-makers in local government to shift their focus to dealing with drinking water management more decisively.

## RESEARCH DESIGN

The methods used to conduct this study were both qualitative and quantitative (Mixed Method). The researcher decided to combine these methods in order to have a one-on-one interview with the individuals responsible for management of water services in municipalities. The number of these respondents is limited as there is only one water service/technical manager per municipality. This also gave the researcher an opportunity to visit the identified water treatment works in order to guide the data collection and the completion of survey questionnaires at the same time.

The research method to investigate the perceptions of water service managers and purification plant superintendents/supervisors in the identified municipalities regarding the introduction of the Blue Drop Certification Programme was **qualitative** in nature. It involved the use of a semi-structured questionnaire to conduct the interviews. The method of investigating the perceptions of process controllers and non-professional employees was **quantitative** in nature. A structured questionnaire was developed to conduct a survey with process controllers and non-professional staff. The questionnaire consisted of closed-ended questions, in order to obtain standard answers, which would make it easy for the researcher to compare the responses of the different participants.

## POPULATION AND SAMPLE

In this study the population refers to all municipal water services officials in all municipalities in South Africa. These are specifically water services/technical managers; water treatment works process controllers and their assistants.

According to the Municipal Demarcation Board website, the Mpumalanga Province has 18 local municipalities and three district municipalities. The study only focused on six of the 18 local municipalities.

Non-probability convenient sampling was applied to obtain the qualitative and quantitative research samples in order to undertake this particular study. According to Welman, Kruger and Mitchell (2005:69), this sampling method involves selecting cases that are easy to obtain. The total targeted number of participants in the study comprised forty-two (42).

Interviews were conducted with eight research participants; these included municipal technical directors, water services managers and water treatment works supervisors/superintendents. All the interviewees came from the six local municipalities of the Nkangala District Municipality.

The numbers in the sample of the survey participants who completed the questionnaire in all the municipalities are as follows:

- Fourteen process controllers and one supervisor completed the questionnaires.
- Eight non-professional staff at the water treatment works also completed the questionnaire.
- In two municipalities there were no process controllers to complete the questionnaires. In one municipality the water is provided by external water services providers, namely the J.S. Moroka Local Municipality which participated in both the survey and the interviews. In another municipality it was indicated that they used package plants to purify water from boreholes and the building of a new plant had just been completed. Even though these municipalities did not have process controllers to participate in the survey, their water services managers participated in the semi-structured interviews.
- Only twenty-three out of the initially planned thirty survey questionnaires were completed, while only eight participants in all the six identified municipalities were available to participate in the semi-structured interviews.

## STRENGTHS AND LIMITATIONS OF THE STUDY

The main limitation of this study is that it cannot be generalised to a larger population of municipal water services officials due to primarily differing geo-hydrological circumstances in the respective municipal areas, but it can provide

the water sector with an opportunity to learn more about perceptions of municipal officials regarding the Blue Drop Certification Programme in order to look at other similar cases in the future. The use of two separate data gathering instruments intensified the worthiness of the study.

## **DATA ANALYSIS**

The analysis of data was done separately for both the qualitative and quantitative methods. Qualitative data gathered through the semi-structured interviews were analysed by identifying common themes that emerged from the participants' descriptions. The data were organised according to each of the questions used in the interview schedule. Consistencies and differences in the participants' responses were identified and grouped together. Sentences and themes that speak to one theme were clustered into categories to reflect one meaning.

## **RESEARCH FINDINGS**

Eight of the twelve originally identified participants participated in the interviews. Four of the eight interviewees were water treatment works supervisors and the other four were from middle to senior management in the water services division.

With reference to the interview question *"What do you think of the Blue Drop Certification Programme?"* there was a general consensus among all the interviewees that the Programme is a good initiative for the water sector in South Africa in that it raises awareness in municipalities about the importance of good management of drinking water quality and that it has so far improved compliance with drinking water quality standards. Some indicated that it helps to protect communities from drinking unsafe water. One interviewee mentioned that the programme has improved the operation and maintenance of water treatment works infrastructure in municipalities.

On the questions *"How do you think it will change the management of water services in your municipality? Do you think the programme has already brought about any changes?"* The interviewees remarked that for a positive change in water services management to manifest, senior management in municipalities should be involved in drinking water quality management. In response to the second part of the question, there were mixed responses from interviewees. Most interviewees were of the opinion that the programme has improved communication between water services senior officials and their subordinates. Some are now noticing political interventions in the management of drinking

water quality, something that was not happening before. One interviewee pointed out that management has even decided to appoint qualified staff in the water treatment work and this has brought improvement in the water treatment works. One interviewee indicated that the impact of the programme in his municipality is not yet evident.

On the question *“What do you think is the best way to regulate drinking water quality in municipalities”* the general point of view among the rest of the interviewees was that the Blue Drop Certification Programme is an acceptable form of regulation for drinking water quality and that it will need to be improved and adjusted as time goes.

Regarding the enquiry about possible reasons for poor potable water supply delivery by a WSA in a municipal area, the poor operation and maintenance of water treatment works infrastructure was raised as a major concern by most interviewees. Constant changes in management and leadership also have an impact on the morale and performance of employees. Municipalities need to appoint experienced and knowledgeable people, people who have a passion for the management of drinking water. Those municipalities which do not comply with drinking water quality standards should be labelled and also need the intervention of the Department of Co-operative Governance and Traditional Affairs and the DWA. Budgetary constraints and lack of payment for services were cited as major problems affecting the performance of municipalities. In some municipalities, communities still believe every service provided by a municipality is free. Communities need to start paying for services they receive from municipalities.

The question *“What is your understanding of drinking water quality regulations?”* elicited mixed responses among the interviewees. Two interviewees indicated that they are not familiar with water services regulations, but have heard about SANS 241 and the regulation for classification of water treatment works and process controllers. The rest of the interviewees pointed out that they know about the existence of the SANS 241 and are familiar with its contents. Familiarity with legislation and regulations is a major concern since some of the participants could not differentiate between regulations, policies, legislation and ordinary documents with the DWA logo. From the responses it was clear that most interviewees are not familiar with water sector legislation, policies and regulations.

In order to provide some pointers to effective implementation of the Blue Drop Certification Programme, the respondents indicated that municipal dynamics should be taken into account when conducting Blue Drop Certification Programme assessments and assessors should be accommodative. The following came out as specific advice regarding the Blue Drop Certification Programme:

- It is important that process controllers are familiarised with Blue Drop Certification Programme assessment criteria.
- DWA regional offices should pay visits to treatment works on a more regular basis.
- DWA should help establish drinking water quality forums in municipalities.
- Communication between DWA regional offices and municipalities should be improved.
- Process controllers should be provided with Blue Drop Certification Programme assessment results of their respective municipalities.
- Municipalities need to ensure that their infrastructure and equipment are properly maintained.

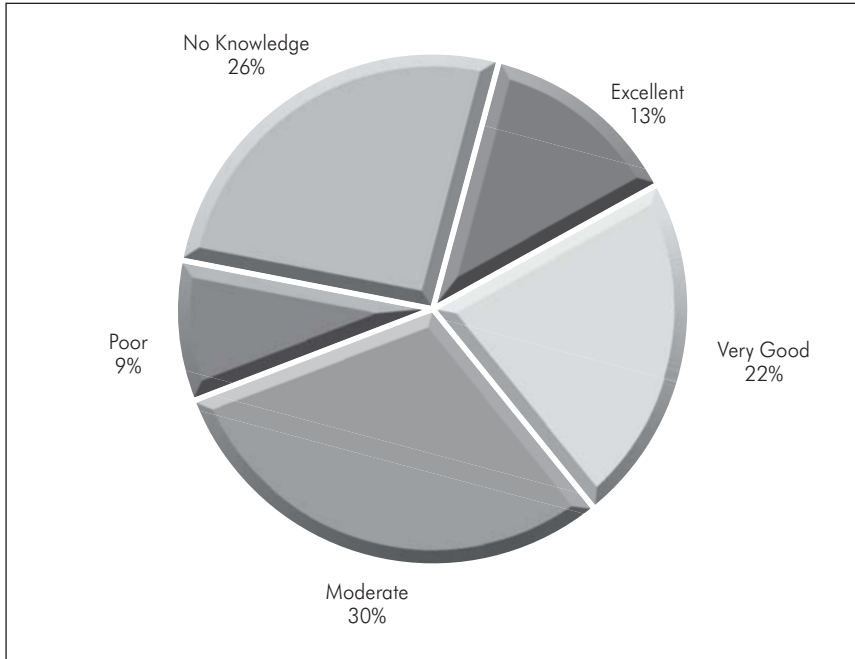
With reference to the statements of the questionnaire submitted to 34 municipal officials (of whom 23 responded) the one specifically asked if they are aware of the Blue Drop Certification Programme in their place of work. On a Likert scale of 1 (strongly in favour of) to 10 (strongly against), an overwhelmingly 83% indicated that they are aware and only 17% indicated that they are not aware of the programme. It is clear from the responses that municipalities are informing their employees about the programme and that the DWA is also communicating the message to the majority of employees. The fact that 17% of employees working at a water treatment plant were not aware of the programme is a cause for concern considering that the certification programme has now been running for four years (2009–2012).

The statement that “the Blue Drop Certification Programme has improved performance in the management of drinking water quality” was aimed at determining if employees had noticed any difference in the management of drinking water in their municipalities since the implementation of the Programme in 2009. Only 44% of the respondents strongly agreed with the statement and another 17% agreed, while 4% disagreed, 13% strongly disagreed and 22% did not know if the programme had brought about any improvement to the way their drinking water is managed.

In response to the question of how important it is for the respondents’ municipality to be assessed, 67% or 14 of the 21 respondents gave the highest rating of 10 and the remaining 7 (33%) gave a rating of between 7 and 9. This implies that participants do realise the value of the assessment done by the DWA.

Respondents were asked to rate their knowledge of the water sector legislation. In this case the researcher wanted to determine the extent to which respondents are familiar with water sector legislation. It is important to note that those who are confident about their knowledge of such legislation and who gave a rating of excellent and very good, make up only 35%. The other 65% have little or no understanding of water sector legislation. The responses are reflected in Figure 1:

**Figure 1: Knowledge of water sector legislation**



Respondents were further asked to rate their knowledge of their own municipalities' 2010 Blue Drop Certification Programme results. Thirty-one percent (31%) of the respondents gave a rating of 1 on the scale of 10. This means that 31% of water services employees in municipalities have no knowledge of their municipalities' Blue Drop Certification Programme results for 2010 while they are employed to process the treatment of drinking water. Another 44% gave a rating of between 9 and 10 implying that they are familiar with their municipalities' Blue Drop Certification Programme results for 2010.

## **CONCLUSIONS**

From the research the authors concluded that, regarding the implemented Blue Drop Certification Programme in selected municipal areas, there still are a number of water service employees who are not familiar with drinking water regulations. The statistics obtained from the survey indicated that a large number (65%) of employees in water treatment works have moderate or no knowledge of water sector legislation and regulations.



In some selected municipalities, information about the Blue Drop Certification Programme's assessment results does not filter down to water treatment works employees. It is also apparent that there are those who are not informed about the Programme's assessment results of their municipalities. One can therefore conclude that the management cadre in some municipalities do not share the results with their subordinates.

The research results show that supervisors and management of the participating municipalities welcome the implementation of the Blue Drop Certification Programme's assessment initiative. They perceive it as a catalyst to improve the management of drinking water and maintenance of water service infrastructure. From the survey results it is also clear that the majority of participants are in favour of the Blue Drop Certification Programme. All of the respondents (100%) support the Programme since they perceive it as a mechanism to improve the management of drinking water quality and ultimately to ensure safe drinking water. The authors can conclude that for these employees, an intervention such as the Blue Drop Certification Programme has been long overdue.

The research results also show that respondents need the support and involvement of senior management in the management of drinking water. It is therefore safe to conclude that in some municipalities drinking water management is not afforded the attention it deserves by senior managers. It seems that senior management is not fulfilling its oversight role in ensuring safe water in some of these municipalities' geographical areas of responsibility. From the interviews it became clear that the Blue Drop Certification Programme has in some cases motivated the municipal management cadre and political leadership to stand up and give the water treatment occupation the attention it deserves.

The Blue Drop Certification Programme also encourages uniformity in the way drinking water is managed by municipalities in their responsibility areas all over the country. The authors determined that 61% of the respondents had seen an improvement in the management of water services in their municipal areas since the implementation of the programme. The rest have not yet seen any improvement in their municipalities since the implementation of the programme. It is therefore clear that the DWA and other stakeholders have some work to do in ensuring that some of these municipalities work towards complying with drinking water quality regulations.

## **RECOMMENDATIONS**

Although the research findings clearly demonstrate a positive attitude by water service employees who participated in this research towards the Blue Drop Certification Programme, there are certain areas that may require attention from

the relevant government departments and municipalities. The recommendations that follow are based on the findings of the empirical study:

- It is important that water services employees in municipalities should be familiar with the legislation, regulations and policies that govern their functioning. Posters depicting relevant parts of regulations affecting process controllers and their assistants in particular should be developed by the DWA and be made available in all water treatment works.
- Water treatment works employees involved in the treatment of water should be familiarised with the Blue Drop Certification Programme's assessment criteria since they are involved in working towards achieving the Programme's status.
- Blue Drop Certification Programme assessment results should be passed down to the water treatment works employees. The information to process controllers should include details of what went well and what went wrong in their respective potable water treatment works. This will make them feel part of the solution when implementing corrective measures and even when celebrating the achievements of their potable water treatment works.
- The nature and extent of budgeting by municipalities for the water service function should be improved. The water function should be treated as a business in municipalities and be accorded the status it deserves. Funds allocated by the DWA and National Treasury for water services infrastructure should be utilised for the assigned purpose. The responsible departments should ensure that municipalities account for the use of such funds and corrective measures should be considered where the funds are not properly accounted for.
- Politicians responsible for technical services which include water services should be duty-bound to undergo a compulsory induction on drinking water management in order to understand the operation and maintenance of water services infrastructure and water-related legal frameworks. The performance assessment of water or technical managers and political leadership should be linked to the achievement of the Blue Drop Certification Programme status. This will ensure that the municipality also provides the necessary resources to work towards the achievement of this status.

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## AUTHORS' CONTACT DETAILS

Prof Eric Nealer  
 Public Management & Governance  
 School for Social and Government Studies  
 North-West University  
 Private Bag X6001  
 Potchefstroom 2520  
 E-mail: [eric.nealer@nwu.ac.za](mailto:eric.nealer@nwu.ac.za)  
 Tel: 018 299 4332 or Mobile: 082 876 7397  
 Fax: 018 299 4254

Mr Dennis Mtsweni  
 P O Box 7022  
 Pretoria 0001  
 137 Savannah Country Estate  
 Pretoria 0001  
 Mobile: 072 183 0607