



Poor basic water supply facilities and infrastructure in South Africa: A hospitality sector perspective

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Abstract

This article looks at the crisis of the unavailability of quality water supply and the impact as a result of poor water supply facilities to all within the borders of South Africa and in particular, tourists who visit the country. It points out that South Africa, as a popular tourist destination should have a first-class water supply infrastructure for purposes of supplying water to various lodges and accommodations. Against this backdrop, this article indicates that water is a basic human rights under the Republic of South African Constitution of 1996, and that everyone, including foreign residents and tourists are entitled to potable water. The article notes that one of the major reasons for poor water infrastructure is the lackadaisical attitude and neglect of constant and proper maintenance of the water infrastructure. More importantly, it examines various interventions that are currently in place to ensure an efficient water supply. This article contributes to the body of knowledge regarding the need to ensure that basic water supply facilities have to be structurally sound in order to deliver potable water. This point is made against the backdrop that there is no article that has delved or researched this aspect of linking basic water supply facility provision with hospitality business, and the requisite interventions that have been introduced to address the problem in South Africa.

Keywords: Water supply facility, hospitality industry, contamination, water-borne diseases, regulations

Introduction

The tourism industry and in particular the hospitality sector, depends a great deal on the availability of water resources. Hospitality businesses use water for different purposes such as “washing or using the toilet, when participating in activities such as ski or golf tourism (snowmaking and irrigation), when using spas, wellness areas or swimming pools. Water is also needed to maintain the gardens and landscaping of hotels and attractions, and is embodied in tourism infrastructure development, food and fuel production” (Gossling, 2012). Poor water supply facilities and infrastructure have a severe impact on the quality of water resources and this can consequently have a concomitant detrimental impact on tourism and tourists. A 2010 World Health Organisation (“WHO”) and United Nations Children’s Fund’s Joint Monitoring Programme report indicated that more than one in every six people worldwide do not currently have access to sufficient, clean and safe potable water for their daily personal use (Bartram & Cairncross, 2010). It is further estimated in the report, that approximately 88% of the world’s deaths related to diarrhoea are as a result of insufficient availability of water for hygiene purposes. This shows that the water problem is a global one and needs the world’s attention.

South Africa is considered to be one of the few nations that recognize the right of everyone (including non-citizens) in the country to sufficient water (Bluemel, 2004; Francis, 2005). This right is stated explicitly in its Constitution of 1996 (YEAR) which further states that water must be realised and enjoyed by everyone in South Africa (Mehta & Ntshona, 2004).

The concern is that even though the right to access of potable water is constitutionally guaranteed, poor maintenance of water infrastructures has resulted in broken and dilapidated water infrastructure which is a major impediment to the accessibility of quality and sufficient potable water.



In South Africa, with its mix of a developed and developing economy, there is huge water access inequity. 9.7 million (20%) of the people do not have access to adequate water supply and 16 million (33%) lack proper sanitation services. Furthermore, in low income settlements such as townships and rural areas where the predominant black majority live, there are basic water supply deficits spread around the provinces and local areas of the country. This, of course is a major concern for a country that prides itself as one of the top world popular tourist destinations (Cole, 2012). Undoubtedly, as a top class tourist destination, South Africa is expected to be able to avail top class services and sufficient basic amenities such as water to the tourists, especially in any accommodation or place in which they stay such as hotels, lodges, bread and breakfast businesses and so forth, which have been reported to use tons of water on a daily basis for their operations. Hotels are highly water-intensive businesses, and water scarcity presents a pressing problem for managers who rely on an uninterrupted supply of water to meet guests' needs and maintain profitability and hygiene (Popely, 2018).

In order for a tourist to experience top class hospitality, they expect a very good change that will be memorable and refreshing hence the best experience they can have wherever they go and in any tourist destination (Komppula et al., 2016). This is because, generally, according to Smith (2012), "a tourist is a temporarily leisured person who voluntarily visits a place away from home for the purpose of experiencing a change." Bearing this in mind, since water plays significant role in human life, it will therefore be a bad experience if the water that is available is not potable and thus fit for human consumption (WHO, 2004).

Consequently, realising that water is an inevitable important resource that sustains life (Takacs, 2016), the government, has introduced various interventions that should ensure that impediments to regular water supply are addressed whenever they occur, or are about to occur. These interventions are robust policy and legislative interventions that will ensure that water supply facilities are constantly maintained and upgraded and that swift action is taken to ensure that those who have responsibility to keep water infrastructure fit for the purpose, discharge their responsibilities promptly and also efficiently. There is need to use these interventions regularly and effectively in order to address water infrastructure impediments, because, according to Eales (2009), water "...leaks and losses associated with neglected maintenance create supply bottlenecks, and raise the costs of provision." This is typically what is currently affecting the hospitality sector in South Africa because water leaks and losses have a huge impact on its operations, hence increasing the cost of doing business.

An intervention introduced by the government for purposes of realising the constitutional mandate of South Africa of access to sufficient, adequate and clean potable water was the promulgation of The National Water Act of 1998 (NWA) which places the water resources of South Africa under the sole custodianship of the state (Nealer & Raga, 2008). Section 2 of the NWA provides that it is the purpose of the Act to "ensure that the nation's water resources are protected, used, developed, conserved, managed and controlled taking into account *inter alia* the basic human needs of present and future generation, equitable access to water, social and economic development, the public interest, the growing demand of water, ecosystems and biological diversity and international obligation" (Pienaar & Van der Schyff, 2007). This resonates very well with the Water Services Act (1997) which provides that everyone has a right of access to basic water supply and basic sanitation. The implication of this is that every tourist in South Africa has the same right of access to adequate and clean drinking water as its citizens (Tapela et al., 2012). Obviously, availability of potable water is tantamount to protecting and promoting the rights to dignity and life (Chowdhury et al., 2011).

Fundamentally, The United Nations (UN) Committee on Economic, Social and Cultural Rights (CESCR), which ensures the implementation of the 1966 International Covenant on Economic, Social and Cultural Rights (ICESCR), has emphatically stated the nexus that is in existence between the right to water and the enjoyment of health and other human rights as follows: "water is a limited natural resource and a public good fundamental for life and health." Access to potable water will, undoubtedly make the stay and experience of any tourist to



South Africa acceptable from that point of view (Scheyvens, 2011). On the contrary, poor water will definitely have a negative impact on any tourist in South Africa wherever the tourist lodges or stays (Smith, 2012).

It is the responsibility of the government to ensure that water infrastructure facility is up to date, well refurbished and maintained for purposes of distributing potable water to all (De Kadt, 2008). This is why it is critically imperative that water infrastructure should be prevented from damage, and if damaged, should be promptly repaired and fixed in order to prevent water leaks, spillage and contamination particularly as a result of burst pipes (Geldreich, 1996). According to Geldreich (1996), "...the purpose of a water distribution system is to deliver to each consumer safe drinking water that is also adequate in quantity and acceptable in terms of taste, odour, and appearance."

Methodology

This article utilized extensive relevant literature pertaining to the issues of the linkages between the hospitality industry and basic water supply facilities. The article rigorously reviewed salient literature and used this to address the inherent problems of challenges making sufficient and quality water available to the hospitality businesses. It considered extensively the impact that contamination of water has, which mostly occurs due to pipes that burst and leaks, and the impact of such on water being supplied to hotels and lodges. More importantly, it critically examined various interventions that have been introduced to address the problem.

Literature Review

The industrial and agricultural sectors consume about "90% of the world's fresh water resources" (Nobonita et al., 2011). The hospitality industry falls within the ambit of industries that consume massive amounts of water due to the nature of the business (Tortella & Tirado, 2011). Undoubtedly, tourism is one of the main driving forces behind economic growth in South Africa (Dwyer et al., 2011). In the same vein, tourism water demand is huge and as such can generate big problems for water sustainability especially in countries where water is scarce, or where water supply facility is defective and in a state of disrepair and a typical example of this, is South Africa (Gleick, 2014). An industry that is closely linked to tourism is the hospitality sector. In the hospitality industry, water is one of the main components of its operational requirements (Smith, 1994). Therefore, considering that there is shortage of literature on the subject matter, to date, it is imperative to assess a major factor (clean and safe water supply) that is linked with tourism and the hospitality sector. The hospitality sector is the focus because it is the most popular means of accommodation for tourists. Furthermore, the hospitality sector utilizes higher levels of water consumption in virtually all aspects of its varied operations (Tortella & Tirado, 2011).

The article is premised on the ground that there is international recognition of the human right to water (Bakker, 2007). In the same vein, the right to water is equally protected by the South African Constitution which categorically states that everyone is entitled to enjoy this right (Muvingi, 2001). For this reason, the state is under the obligation to provide access to safe and clean water for everyone. More importantly, the right to potable water also extends to and covers tourists visiting South Africa (Landu & Brent, 2006). The right is not limited at all. As a matter of fact, it is available to everyone in South Africa and as such to be enjoyed by everyone in South Africa (Scanlon et al, 2004). However, in order to do this, the water being provided should be potable, clean and free from any contamination (Donnelly, 2013). This presupposes that processes of conveying water from the water reservoir or catchment areas must be of a high quality standard and thus devoid of any defect or contamination (Solanes & Jouravlev, 2006).

It is pertinent to point out that hospitality industry "is characterized by a generic product and production process. For tourism to be considered an industry, it is necessary to show that such



a generic product and process exist” (Smith, 1994). Obviously, these generic products and processes do exist, and according to Smith (1994), they consist of five elements namely “the physical plants, service, hospitality, freedom of choice, and involvement.” The combination of all these elements starting from the production to progresses through intermediate inputs and outputs and lastly to final outputs, will culminate in positive tourist experience in any destination they find themselves in. This process demonstrates that tourism is an industry which caters for tourists and is a confirmation that it indeed is an industry (Higgins-Desbiolles, 2006). In the words of Higgins-Desbiolles (2006), “Tourism is in fact a powerful social force that can achieve many important ends when its capacities are unfettered from the market fundamentalism of neoliberalism and instead are harnessed to meet human development imperatives and the wider public good.”

One should not lose sight of the fact that water also plays a significant role in recreation/leisure activities such as swimming within hotel accommodation facilities (Smith, 2014). Tourists who prefer to swim will use the swimming pool, if available in the hotel, and it is imperative that such a swimming pool facility should contain clean and hygienic water (Corcoran, 2010). It is also imperative that the swimming pool be fitted with proper equipment to prevent water loss, contamination or leakages (Morote et al., 2017).

The recent harrowing water scarcity experienced in Cape Town was a wake-up call for the nation and also emphasized the importance of access to water (Maxme, 2018). The water scarcity impacted negatively on the nation’s economy, business and the life of its residents in various forms (La Shier, 2018). One of the hardest hit industries was the hospitality sector, that had significant loss of revenue due to its extensive reliability on water to provide necessary services to its customers(Lane, 2018) . Although, it might be said that the cause of the water scarcity in Cape Town could not have been avoided as the major case was insufficient rainfall (Khoza, 2018). However, other possible causative factors are poor dam maintenance and low storage capacity of dams and water wastage by consumers. In order to address this problem, the government started putting various water usage instructions and restriction’s in place, for example, telling the people, the amount of water they are eligible to use in a day (Poplak, 2018). Pursuant to this, the government admonished that “water scarcity in Cape Town was reaching “Dangerous Levels”. Cape Town’s “Day Zero” was moved forward by two days after water consumption increased to “dangerous levels” from an average of 611 million litres per day last week to 628 million litres this week. “Day Zero” threatened to get closer with each visitor and resident that did not adhere to the restriction measures(La Shier, 2018). This of course, was not good news for the hospitality businesses, particularly lodges and restaurants, where water is needed for virtually all operations (Palm, 2019). The province became disorganised and the people were helpless for several months. This had a huge impact on socio-economic activities in the whole province. Some tourists who had pre-booked visits had to cancel their trips because of the problem of water scarcity that ravaged the whole city (Lane, 2018). As a result of this, economic activities were disrupted as were social activities (Goering, 2018).

The government of Cape Town introduced water restrictions in order to ensure that all consumers had reasonable amount of water for domestic use on a daily basis. The government did this knowing very well that if they did not, “achieving water balance will not be easy. The policies, laws, and practices that shape water use today rarely promote all three basic tenets of sustainable resource use-efficiency, equity, and ecological integrity. Even a casual glimpse around the world shows water allocation and use to be in a chaotic state” (Eales, 2010). This is because water needs have its own complexities, while farmers would want to use water for watering their farms so that the crops can grow, owners of a car-wash would want to use scarce water to wash cars, and pool owners to fill swimming pools for leisure activity swimming.



Considering that Cape Town is a key tourist's destination in South Africa, during the period of "day-zero", many of the lodges struggled with touristic water demands (Hoogendoorn & Fitchett, 2018). Therefore, in order to continue to be in business, the hospitality businesses, had to come up with different strategies and initiatives to get water, and by so doing, some lodges had boreholes drilled and constructed in order to source water to be used for their operations. Undoubtedly, this resulted in expending money which was not budgeted for. The hospitality sector had to embark on this because tourism has an impact on the economy of Cape Town and the nation at large (Smith & Puczko, 2014).

It is worth mentioning that while it is the sole responsibility of the government to make safe and clean water available for all, the private sector is really not precluded from sourcing their own water (Grimsey & Lewis, 2007). As such, hotels and lodgings have boreholes from where they source and utilise water for their day to day activities. However, the private sector sourcing for its own access to water is regulated by the government, because the water sourced has to meet the standard and quality set out in all regulations and legislation. There are also private dams which are treated through water technology and being used to generate water for private lodges and hotels predominantly in the rural remote areas where government water infrastructure is unable to reach (Pisani, 2006).

The Water Research Commission reported during Water Week (held at Rapotwane in Bela Bela in May 2014) that the "Constitution of South Africa has employed a legal obligation on the government to realise people's right to sufficient water." In order to do this, "South Africa has developed policies, strategies and institutions to manage water resources and deliver water services to people through local government structures." According to Karar (2014), "many of our other constitutional rights also depend on water. The right to live a dignified life can never be fulfilled unless all the basic necessities of life such as work, food, drinking water, housing, health care, education and culture are adequately and equitably available to everyone."

According to du Plessis and Kotze (2012) "it is the obligation of government (Parliament, the National Department of Water Affairs, municipalities, water catchment management agencies and other organs of state) to guarantee that the constitutional right to water becomes a living reality for all people no matter where they live, who they are, or what they earn." Schedule 4 Part B of the Constitution tasks local government with providing "water and sanitation services, limited to potable water supply systems and domestic wastewater and sewage disposal systems."

It should be pointed out that local government represented by the municipalities incurs the liability and responsibility to ensure that the right of access to water is implemented and fully realised. The duties of local government (municipalities), however, cannot be performed in isolation to the other spheres of government. Section 154(1) of the Constitution states that the National and Provincial government must support and strengthen the capacity of municipalities to perform their functions. This would include amongst other things the provision of access to water.

According to Mirugi-Mukundi (2014), many communities, in particular, low income and rural areas, lack access to water and sanitation as a result of non-functional or broken infrastructure. Also, the lack of access to basic water and sanitation infrastructure affect vulnerable groups of people, especially women, children and persons with disabilities.. Heleba (2011) states that "despite the free basic water supply policy of 2001, it is of great concern that most of South Africa's water is used by business, especially agribusiness, mining, and other industries, at a relatively lower cost per kilolitre than the cost to poor households."

According to Thornton et al. (2008), water loss is happening all over the world as a result of both the end-user's poor quality plumbing and the water supplier's poor quality distribution piping. Water losses are thus a world problem and they occur in both the developed and developing countries, especially those that are still undergoing transformation.



According to the Department of Water and Sanitation Media Statement (12 March 2016), the increased use of groundwater sources has seen a large number of water infrastructure become dysfunctional as a result of the source becoming compromised and vandalized. To this end, the Department of Water and Sanitation is supporting drought relief efforts by supporting the maintenance of existing infrastructure, and the placement of new water infrastructure (Mokonyane, 2014).

In South Africa, section 27(2) of the Constitution provides that “the state must take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of each of these rights such as the rights to water and sanitation.” In the *Government of the Republic of South Africa v Grootboom* 2001 1 SA 46 (CC) with regard to the term ‘availability of resources’, the CESCR has stated that it refers to resources existing within a state as well as resources available from the international community through international assistance and cooperation.

In addition, section 7(2) of the Constitution, provides that “the state must respect, protect, promote and fulfil the rights in the Bills of Rights. The duty to respect requires the state to desist from interfering with the enjoyment of the right of access to sufficient water. The state must refrain from engaging in any practice or activity that denies or limits equal access to adequate water and desist from arbitrarily interfering with customary or traditional arrangements for water allocation. The state must also not unfairly discriminate when allocating water resources” (Grizzetti et al., 2016). Hence, the government have put in place several laws and interventions to ensure that; i) everyone has access to clean and safe water and ii) that water wastage and contamination is curbed.

- According to Greenhotelier.org, (2013), hotels need to set measurement and targets to establish water conservation plans and they suggest that hotels should:
 - Carry out a water audit to show where the major water costs are and where savings can be made
 - Compare total and departmental consumption figures with hotel industry benchmarks to determine the potential for savings (see the diagrams below)
 - Calculate the water used per guest per night by dividing the total water consumed in guest rooms by the number of guests for that month. If your utility bill is in cubic metres rather than litres, multiply the number of litres by 0.0001
 - Check if funding / loans are available from government or other sources for investment in new technology or water reduction schemes
 - On the back of the information gathered, establish realistic goals for each department and the entire hotel
 - Communicate the management’s commitment to water reduction and the subsequent objectives and goals to all employees
 - Train staff so they understand how to make prudent use of water and how to maintain equipment for optimum energy-efficiency
 - Encourage staff to put forward their own suggestions for water reduction
 - Establish a monitoring and targeting system so that you can regularly report progress back to staff and other stakeholders. Motivate through feedback and reward success
 - Join forces with other hotels and provide mentoring to help them reduce their water consumption



Regulatory Interventions Introduced to Curb Water Leaks and Losses

Commonly, interventions have general applications since they apply to issues pertaining to both domestic and industrial water usage (Sobsey et al., 2008). With regard to the hospitality sector, the interventions have the potential of ensuring that basic water supply infrastructure are subjected to a series of repairs, refurbishment and if required, replacement, in order to ensure uninterrupted supply of clean and safe water (Jalal, 2008; Popely, 2018). Some of the interventions that have been put in place for regular water supply are discussed below.

The National Development Plan (NDP)

The NDP provides that water is a strategic resource which is critical for social and economic development and there is growing concern about the potential of water-related risks. This is the reason why, after 1994 in South Africa, a major infrastructure expansion programme was initiated to address a long history of underinvestment in order to improve access to potable water in all aspects of the economy and in particular the hospitality sector where water plays a critical role (Preston, 2015). The essence of this intervention was to ensure a greater focus on water-resource management at all levels particularly on the infrastructure that are used to convey water to consumers (Loucks & Van Beek, 2017). While this intervention is welcome, it is imperative to mention that a lot still needs to be done because there are still many infrastructural water deficits and as such, supply of water is being affected.

White Paper on National Water Policy for South Africa, 1996

This policy states that the conditions upon which authorisation is approved to use water shall take into reflection the investment made by the user in developing infrastructure to be able to use the water. This speaks to the government as the custodian and distributor of water to ensure that all the water facilities are perfectly in order and if there is any need to carry out repairs, such should be done timeously. In the same vein, it also concerns the users such as hotels and lodge owners who need to ensure that in their accommodation, water infrastructure are properly structured and always in a state of good repair. This is said against the backdrop that sometimes the problem of water contamination might be a result of defective plumbing works of either or both the supplier and consumer of water. Either way, the two sides of the coin must always be structurally and infrastructurally sound and appropriate in order to convey and deliver water to the end-users.

Water Services Act 108 of 1997 (WSA)

The Act in Section 3(1) Water Services Act 108 of 1997 (WSA) states that “everyone has a right of access to basic water supply and basic sanitation.” Supply of basic water is to be enjoyed by everyone including tourists and other visitors to South Africa. The public and private sector are expected to work in unison in order to realise and fulfil the right to access basic water supply and sanitation. Therefore, while government plays a critical constitutional role in providing and delivering this right, the private sector such as the hospitality business, are also expected to collaborate with the government to ensure this right is fulfilled and enjoyed. In this regard, water infrastructure of the hotel business has to be up to date and more importantly, the appropriate regulations on sanitation must be adhered to.

Compulsory National Standards and Measures to Conserve Water Regulations of 2001

This regulation was promulgated to ensure that water service institutions repair any major leaks in their water service system within a certain period of time. Tackling any leak or burst in the shortest possible time should be the strategy so as to eliminate water wastage and contamination and thus prevent health hazards. Hence, the need for the institutions to be alert to their repairs, refurbishment and maintenance responsibilities.

In terms of Section 9(1) of the Water Services Act (Act 108 of 1997), the Minister of Water Affairs and Forestry may recommend compulsory national standards in terms of section 9 (1)



of the Water Services Act. These Regulations relates to the supply of safe drinkable water and sanitation services to end-users. The Regulation is put in place to protect end-users, municipalities and water services boards and to ensure the application of comprehensive administration principles.

The minimum standard for basic water supply services is-

- a) “the provision of appropriate education in respect of effective water use; and
- b) a minimum quantity of potable water of 25 litres per person per day or 6 kilolitres per household per month-
 - (i) at a minimum flow rate of not less than 10 litres per minute;
 - (ii) within 200 metres of a household; and
 - (iii) with an effectiveness, such that no consumer is without a supply for more than seven full days in any year.”

Section 12 of the Regulation further requires a water services board to ensure that within 48 hours, any noticed or reported leak is repaired. It goes without saying that a lot of water loss is as a result of pipe bursts and leakage which are not attended to at the time of notice. This regulation’s sole aim is thus to ensure that all water services boards adhere to their mandate of ensuring the reduction of water loss through pipe bursts and leakage. The Department of Water and Sanitation had proposed that to achieve water demand reductions, programmes to reduce water leakage in distribution networks and improve efficient domestic and commercial water use, need to be put in place (Manuel, 2012).

Water for Growth and Development Framework (WGDF), 2009

The framework provides that there is a continuing need to sustain the process of addressing water supply backlogs, which consistently requires continued investment in new infrastructure to areas that lack safe water supplies. Typically, this speaks to hotels and lodges in rural and sometimes remote parts of South Africa. Considering that most of these areas are tourist sites, it is imperative that there is adequate efficient water supply infrastructure in place to cater for tourist needs which include lodgings with supply of clean and safe water which is potable. Water Service Institutions (WSIs) are expected to advance and apply Infrastructure Asset Management (IAM) through their Water Services Development Plans (WSDPs) and water board business plans. A weakness of these plans is their tendency to focus on the development of new infrastructure to address basic service backlogs at the expense of the IAM’s requirements of the maintenance of existing infrastructure. Water infrastructure maintenance must be done continuously to ensure that their lifespan is sustainable. The Department of Water Affairs should be the ‘checks and balance’ on the water service institution to ensure that their duties are executed properly. Failure to deliver must result in termination of contracts.

There was a need to focus more on investment in the upgrading of existing infrastructure since the mainstream of capital investments were made in the 1970s and 1980s. Most existing water infrastructure are at an imminent period of the end of their useful life, which means a significant amount of money will be required for major maintenance and rehabilitation to extend the lifespan of these infrastructure. The capital replacement cost (CRC) of the water infrastructure that is in poor condition amounts to approximately R6.4 billion and that excludes data missing due to maintenance backlog for those infrastructure that are deemed to be in good condition (Ruiters, 2013). According Ruiters (2013), about R4 billion per year will be needed to refurbish or restore water supply infrastructure and the majority of the rehabilitation for the next 30 years will be on canals and tunnels, that mainly supply water for agriculture irrigation. It goes without saying that the government has invested a lot of money to keep existing infrastructure up to date, however, with the growing demands on water infrastructure, no appropriate or alternative analyses and models have since been proposed and/or finalised. Therefore, there is a need to pressurise the government for the development of alternative funding models to improve national water infrastructure management, particularly by investigating relevant



funding models such as those implemented in other countries such Canada, Australia, and India (Grimsey & Lewis, (2007). The governments of these countries have managed to establish mechanisms and controls that allow the involvement of the private sector in the provision of some public infrastructure (Sihombing. 2008).

Other Obligations Related to the Right to Water and Sanitation

At the international level, obligations are applicable to everybody and as such, tourists are protected and covered in that; the United Nation Sub-Commission on the Promotion and Protection of Human Rights, is an expert body that holds the responsibility to issue guidelines to the UN Human Rights Council, and states the reasons, while analyzing the legal basis and consequences of the right to water and sanitation. In 2004 and in 2006 it handed out procedures for the realization of the right to access water supply and sanitation. The Sub-Commission Guidelines are in line with the provisions of the General Comment No. 15. The General Comment No. 15 and the Sub-Commission Guidelines, when read together in explaining the importance of the right to water and sanitation, gave rise to the following key components:

Sufficient water

This entails that everyone is entitled to water supply owing to the fact that water is life. We all need water for daily personal and domestic uses such as drinking, bathing, washing of clothes, cooking, flush toilets garden watering and so on. The WHO recommends that at least a person should have a maximum of 50-100 litres daily, or an absolute minimum of 20 litres per day (Jamie & Bartram, 2003).

Quality

According to General Comment No. 15, water for human consumption and domestic uses is required to be hygienic, nontoxic and safe. Therefore, water must be free from any form of contamination of microorganisms, chemical substances and radiological hazards that can be harmful to a human's health. It is further recommended that drinking water from the sources to end-users, must be of a good standard quality and devoid of any unusual odour, colour or taste. Sanitation facilities provided to the community must be adequate and of the best standard to satisfy the requirements for health, dignity and privacy of all people, including vulnerable groups of people, and to effectively protect and maintain the quality of water supplied to prevent health hazards. For example, if tourists consume contaminated water, they could become ill and this will definitely have a very negative impact on the hosting hotel and the country at large.

Accessible water and sanitation

It is advisable for water service providers to ensure that water and sanitation facilities are located within safe and convenient areas of reach, in or closer to households, learning institutions or workplace such as hospitality sector. The South African Water Services Act, for example, stipulates that "water service authorities have a duty to end-users or potential end-users to progressively ensure efficient, affordable, economical and sustainable access to water. Water service authorities are required to allocate resources equitably and reasonably.

Affordable water and sanitation

Water and sanitation are also problems in urban informal and low income urban areas, which also have tourist attractions located within them. Access to clean and safe water and sanitation is a right to everyone regardless of where they are and who they are and the cost of accessing these rights should be low enough for all to access them.

Water and sanitation services must be affordable to all consumers. This is more relevant to small and medium size hospitality business entrepreneurs who operate lodges in the rural areas where there are various tourist attractions sites. The costs of securing water and sanitation should not reduce their capacity to continue to stay in business, hence the need for



government to invest heavily in water infrastructure in these areas to prevent extra costs linked to the sourcing of water.

It is therefore suggested that for these areas, water and sanitation services need to be subsidized by the government to meet the basic needs of these rural and remote communities, considering the socioeconomic opportunities of having these accommodations in these rural areas serving international tourists who are visiting them.

Synthesis

According to Jamal (2009), "Water supply and distribution infrastructures are vital for current life. They have a significant role in public health, providing safe water for human consumption as well as for essential non-potable uses such as firefighting. These diverse objectives create challenges for everyone who must address in some way the actual performance of the system." In order to satisfy the delivery of safe water to the consumers including tourists in the country, there is need to ensure efficient management of public water supply systems at all times. As such, government and institutions that are responsible for the maintenance of water infrastructures must continually be vigilant for any intrusion of contamination in the distribution network, in order to make sure that there is avoidance of occurrences of microbial degradation of water. Undoubtedly, if the water released into the distribution system is contaminated during its passage and becomes unfit for consumption because the quality of the water would have been compromised, the water has a strange taste, odour, and colour. Contamination during distribution might develop in the pipe network due to the distribution systems age, corrosive pipes, open reservoirs, standpipes and rust storage tanks, soil stability and its corrosively and type of pipe material used often as a result of poor maintenance (Kirmeyer, 2002). Considering that government is the main service provider when it comes to the issue of water services, it is imperative for government to ensure that at all times, water supplied is of a high quality and potable.

It is important to point out that the competition for existing water supplies will require a paradigmatic shift from maximizing productivity per unit based on the number of consumers, because while the population is increasing, water infrastructure is not keeping pace with the demand for water therefore creating a huge gap (Evans & Sadler, 2008). Cognisance should be taken of the fact that while there have been, to a greater extent increased interventions of governmental and state institutions where enormous investments have been made in water equipment and technologies, the inefficient state of monitoring and evaluation and lack of maintenance is impacting negatively on water supply in general terms (Pereira et al., 2012).

With regard to water pricing and tariffs, it is a common cause that the consumers and suppliers of water have different expectations of water tariffs; while consumers like high quality water at an affordable and stable price, obviously, suppliers like to cover all costs and have a stable revenue base from the sale of water to the consumer. Water scarcity, basic water facility and corruption are also having tremendous impacts on the water supply, thereby making it harder for consumers to cope in terms of tariffs and quality as a result of poor infrastructure (Evans & Sadler, 2008). Undoubtedly, this will increase the cost of doing business in the hospitality industry. Small and medium hospitality business owners will be hardest hit in this sector because they are not operating on a very large scale. If care is not taken this might translate into the liquidation of businesses leading to losses of sources of livelihood and this will exacerbate the already high unemployment levels.

From the supply side, if the facilities are in order and able to channel water effectively to the end-users, the level and structure of fees for water and water-related fees can be expected to generate remarkable revenue, improve efficiency of the supply and supplier, manage demand, facilitate economic development and improve public welfare and equity (Rogers et al., 2002). On the contrary, if the supplier uses poor quality facilities and infrastructure, that will likely result in water losses due to leakages in the distribution of water, The cost of the losses



during water distribution are the burden and sole responsibility of the supplier. More importantly the culture of water saving initiatives that are sometimes introduced in response to demand-based factors, often have a significant impact on water consumption. As such, the owners and managers of hospitality businesses, particularly hotels and restaurants should imbibe this culture (Tortella & Tirado, 2011).

Conclusion

There are water supply problems in most developing countries of the world and South Africa is no exception. The developed and industrialised countries of the world have been investing massively in water infrastructure and technologies as far back as 1992. Postel (1992) admonished that "...it is easy for many of us in industrial countries to take water for granted: we turn on a tap, and there it is. Fresh, cold, ready to drink. We have assumed it will always be there, and we have used this most basic gift of nature with little thought for its limits." However, even where there are modern day technologies, water scarcity can constitute huge problems if proper maintenance and management are not in place as is often the challenge in developing countries. Hence, this point is made against the backdrop that water scarcity sometimes could defy the use of technology, and hence result in colossal failure.

Realizing this limitation at all times should be a signal to us all that water should be used efficiently and effectively. Therefore, as part of the efficiency and effectiveness, infrastructure and technologies play critical roles. Water management should be the watchword at all times, this is because, according to Postel (1992), "Although water is part of a global system, how it is used and managed locally and regionally is what really counts." Hotels have strong commercial and moral imperatives for addressing water usage. The related cost is also a string consideration given that globally water accounts for 10% of utility bills in many hotels. Most hotels pay for the water they consume twice – first by acquiring fresh water and then by disposing of it as waste water. Hotels can diminish the amount of water consumed per guest per night by up to 50% compared with establishments with poor performance in water consumption. Morally water is a scare resource in many resorts around the world so hotels have a responsibility not to use more than they need ; in addition, in rural and often remote areas, it safeguards that local residents are not deprived of their indispensable supply, and by dropping the amount of waste-water that requires treatment, this reduces the hazard of water pollution.

This article has tried to demonstrate that all regulatory interventions that are in place to ensure the delivery of safe and clean water at all times for all the people should be properly implemented. Furthermore, factors that can results in water losses and contamination such as leakages should be prevented. More importantly, new water technologies and better policies should continue to be rolled out toward the goal of achieving a secure water future for the human race (Thompson, 2011).

Over and above these aspects, improved water supply facility management and services is imperative in order to enable the inclusive growth and development that South Africans need to escape from the inordinately high levels of poverty and to promote a growth in the nation's economy.

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