

DEFINING HYDROPOLITICS: THE POLITICS OF WATER IN SOUTH AFRICA

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Abstract

As the ability of governments to supply adequate amounts of safe water to communities diminishes, so does the potential for political conflict and instability increase. The political management of our planet's scarce resources, especially water, will largely depend on the capacity and human capital available at local government level. If this is not available, then the resulting water shortages required to sustain communities will become a growing source of political unrest and conflict. It is within this context that hydropolitics needs to be redefined. In South Africa, the inability of local governments to react to the water needs of communities has already become a major cause of service delivery protests. Nowhere in South Africa were the consequences of this more prevalent than with the death of Andries Tatane during service delivery protests in the Seisoto municipality (Ficksburg) in the Free State Province. Water was at the centre of these protests. The solution to this problem requires a holistic approach to water management that takes various other aspects relating to water, or that require water, into account. The solutions require political will and a change in life styles and habits of individuals and communities. It is said that all politics is local, and one does not get more local than our daily reliance on water. Water is already a political issue and needs to be redefined as such in order to put pressure on politicians to recognize the need for political solutions and take responsibility for this.

Keywords: Water; hydropolitics; service delivery protests; institutional capacity; local government; water rights; water pollution; Andries Tatane.

Slutelwoorde: Water; hidropolitiek; diensleweringprotesoptogte; institusionele kapasiteit; plaaslike regering; waterregte; waterbesoedeling; Andries Tatane.

1. INTRODUCTION

Issues relating to humans' continued existence on this planet have to be managed in a holistic manner. One aspect, such as fresh water, can not be isolated from other issues such as land use or biodiversity. Although the management of our planet is the responsibility of all humans, politicians, as decision and policy makers, have to accept a major share of the responsibility for this. This article will not delve into linkages between the various aspects of our planet that are under threat, but rather concentrate on one aspect, namely the political management of water as a critical resource which humans require in order to survive on a daily basis. The importance of water within a social and political context is emphasised by the Unrepresented

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Nations and Peoples Organisation in their statement that: “Human rights swirl around water, one facilitates the other” (UNPO 2010:3).

Natural resources and water are so crucial to daily survival that they are included in South Africa’s constitution in the Bill of Rights. The Constitution (Act 108 of 1996) states that:

“Everyone has the right

- a. to an environment that is not harmful to their health or well-being; and
 - b. to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that
 - i. prevent pollution and ecological degradation;
 - ii. promote conservation; and
 - iii. secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development” (section 24)
- and

“Everyone has the right to have access to...sufficient food and water” (section 27)

Issues relating to the management and allocation of resources are an integral part of politics. Like most other scarce natural resources, water is a growing source of political debate and conflict. It has been predicted that future wars and increased civil violence will occur as a result of competition for scarce resources such as water, cropland, forests and fish. Population growth will place further strain on natural resources as governments try to meet the needs of the growing masses of hungry and unemployed people who continue to migrate to areas where resources are perceived to be available (Compare Kaplan 1994:59 and Solomon 1996).

The current management of water resources in South Africa is fast becoming a serious political and environmental issue. Conflict and political unrest over water is already a reality, particularly as a result of failing service delivery to many residents of municipalities. Water related political issues, however, go beyond the sphere of service delivery. The provision of a healthy and sustainable water supply is an important part of the country’s economic, social and environmental future. As water scarcity escalates, so too will the political discourse regarding water related issues. With this in mind it becomes important to redefine concepts within which to tackle this political debate.

Although the above problems appear to be relatively simple, there are deeper underlying explanations for the growing political crisis regarding natural, and specifically water, resource management. In order to fully appreciate the gravity as well as the relevance of water related issues within disciplines outside those of natural sciences, it is important to take the debate within the realm of politics and its associated disciplines within the social sciences and humanities. Within this context, this article will conceptualize the political debate around water within

the confines of politics and conflict. This article addresses the most pressing water related issues within the current South African political environment. It also looks into the effect of institutional capacity and human capital on the ability of state institutions to manage the delivery of safe and secure water resources to residents of municipalities. Various theoretical concepts and explanations are presented in order to place the issues under discussion within a conceptual framework.

2. REDEFINING HYDROPOLITICS

The provisioning of water is a core responsibility of local governments in South Africa, which is a source of growing competition, conflict, and even violence in local communities. Water is thus central to politics at local government level and is constantly being escalated into the spheres of provincial, national and even international politics. As a field of study, hydropolitics needs to be redefined in order to accommodate more recent definitions of politics as well as other developments in this regard.

Turton and Henwood (2002:15-16) developed a definition of hydropolitics around Easton's 1965 definition of politics² which defined politics as the authoritative allocation of values in society. In terms of this definition hydropolitics was defined as "the authoritative allocation of values in society with respect to water". This definition is supported by authors such as Hellberg (2005) who did extensive research for a paper titled *Talking about water – Discourses and hydropolitics in South Africa; Perspectives on equity, sustainability and economic efficiency*. Besides conceptualising hydropolitics, this paper also sheds light on water as an economic good and human right.

In order to determine the role of water within the current political environment, it is important to first define politics. In this respect, Duvenhage (1998:3) supplies a more practical definition of politics, namely that: "politics has to do with the ability to mobilise and organise support in a society (however defined) with the aim of acquiring and/or consolidating a political power base (mostly institutionally based) through which binding decisions (allocation of values) may take place in a society, or which may inhibit competing power bases, or prevent them from imposing their values or decisions on a society". The values described in the definition are found in the various political party and government policies that determine how resources are utilised, allocated and managed. In transitional societies varying degrees of power and even violence may be used to obtain the support for the consolidation of political power bases in order to obtain control over resources.

Just as geopolitics was coined and became a field of study on its own, so too is water (hydro) politics growing as a field of study, especially in relation to its role

2 Easton D 1965. *A systems analysis of political life*. New York: Wiley.

in determining future developments within municipal governments in South Africa. Geopolitics was first coined in Germany in 1924 with the launch of a periodical *Zeitschrift für Geopolitik*. The debate around geopolitics was central to the politics of the pre-World War Two era and was a contributing factor to the war in that it lent itself to the expansionist and nationalistic aspirations of Nazi Germany (Muir 1975:5-7). In a similar fashion John Waterbury (1979) coined the term hydrogeopolitics in his book *Hydrogeopolitics of the Nile Valley*. Within a geopolitical context, land mass was a scarce resource over which nations were prepared to go to war, so too is water fast becoming a scarce resource that is a source of conflict within and between nations. In this respect Martin (2006:30) accurately indicates that “(r)ivers and aquifers are drying up. Many farmers will not have water essential for food growing. There will be wars over water.”

If one conflates the practical definition of politics with the political discourse around water, then hydrogeopolitics could be redefined as “attempts to mobilize support in order to consolidate a power base which can secure the equitable and sustainable supply, management, and distribution of water resources to specific areas, communities and activities”.

The nature of the hydrogeopolitical debate will be determined by the sphere of government within which it is taking place. It can thus easily divert from an international issue, to a national policy debate, to an issue of the capacity of officials to supply water within a local government. In this respect Christianson (1999:14) refers to three key components of sustainable development that are applicable to water resource management in South Africa. These are political will, engineering design capacity and institutional capacity. He indicated that it was specifically in the area of institutional capacity that water projects failed due to the inability of local authorities, water boards and non-governmental organisations to ensure that systems are maintained and costs recovered.

3. HYDROGEOPOLITICS AND CONFLICT

Water is a source of conflict, competition and more recently even violence in South Africa. While conflict is a normal part of most human interaction, the common, but incorrect, perception exists that it is only destructive in society. All societies are characterised by scarcity, both material (minerals, finances, food, water, etc.) and non-material (values, power, etc.). As a result of scarcity there is an ongoing conflict among groups and individuals over the allocation of these resources. The greater the scarcity of a resource, the more intense the conflict surrounding its division in society. In this respect water, as a scarce resource, has great potential to be a cause of further conflict and violence. It is interesting to note that when former President Anwar Sadat signed the peace treaty with Israel in 1979, he said that

Egypt will never go to war again, except to protect its water. Former King Hussein of Jordan said he would never go to war with Israel again except over water and the former United Nations Secretary, General Boutros Boutros-Gali, indicated that the next war in that area would be over water (Darwish 1994:1).

While various definitions of conflict and violence exist, Marx (1971:14-15) defines conflict within the context of a struggle over values, claims to status, power and scarce resources. Within his explanation the outcomes appear to be destructive in nature and involve the neutralisation, injury or elimination of rivals in the conflict.³ On the other hand Duke (1976:45) indicates that competition is an alternative to conflict. Whereas conflict, and in its extreme form violence (injuring, disrupting or destroying human beings, human psyches, property or social structures), accommodate a negative aspect, competition is aimed at obtaining an advantage over, and not the destruction of, other role players.

A scarce resource such as water is by its nature a source of competition, but often reverts to conflict and violence in communities. Violence may be interpreted as a symptom of the erosion of government's effectiveness and legitimacy (Cord *et al.* 1974:365). It however serves to inform society that there are groups who are willing to ignore the law and the constitutional order in order to express dissatisfaction. According to the Chairperson of the South African Association of Water Utilities and African Water Association VP, Duduzile Myeni, water has been at the centre of service delivery protests in South Africa. He pointed to the continual deterioration of infrastructure at the start of the water value chain as a concern (Ndaba 2011). The infrastructural problems are also directly related to the capacity of bureaucracies.

Given in Table 1 is an indication of how service delivery protests in South Africa have increased in the past few years. This table does not relate to peaceful gatherings, but to incidents in which residents of specific areas showed their dissatisfaction, mostly through violence, with the provision of services such as housing, water, sanitation, electricity or other amenities and facilities generally provided for by local governments.

TABLE 1: SERVICE DELIVERY PROTESTS IN SOUTH AFRICA

Year	Number of protests
2004	10
2005	34
2006	2
2007	32
2008	27

3 Also compare definitions of Anstey (1991: 4) and De Reuck (1966: 152-213).

Year	Number of protests
2009	105
2010	111
To 20 May 2011	23

(Extrapolated from Mnyandu 2011)

Table 1 indicates that the number of service delivery protests decreased during local government election years (2006 and the first few months of 2011) when public participation was at its highest. The intensity and violence of protests however appear to be increasing as seen in the death of Andries Tatane during service delivery protests in Ficksburg (see section 6).

In this respect Hanekom (1987:33) states that: “For the man on the street, public participation is the equivalent of his involvement with the authorities when paying taxes, exercising the franchise, becoming a member with a political party, expressing his views in writing on governmental matters in letters to newspapers, or by chances of meeting an elected member of a legislative institution.” Most of these aspects of public participation peak during election years. This proves that when residents of municipalities are empowered and the perception exists that political leadership is accountable to them, they are less likely to revert to extreme forms of conflict or violence. The perception that democratic institutions are able to resolve service delivery issues is thus more pronounced during the years that citizens are able to utilize their democratic rights. The numbers of protests can be expected to continue to increase should the effective management of water related issues decline. The South African Government’s National Climate Change Response White Paper paints a gloomy picture of the country’s future water resources. The White Paper (2011:17) indicates that: “Based on current projections South Africa will exceed the limits of economically viable land based water resources by 2050.” This implies that water related social unrest and protests can be expected to increase in the near future.

This is not unique to South Africa. Arsenault (2012:3) indicates that Bolivia, India, Botswana, Mexico and the USA have seen vigorous water related protests. He states that: “Strife over water, like conflicts more generally, will increasingly happen within states, rather than between them.”

4. AN INTEGRATED APPROACH TO HYDROPOLITICS

Within a global context about one billion people already lack access to minimum water supply services and 2,6 billion to minimum sanitation services. About 6 000 children (mostly under five years) are estimated to die daily as a result of preventable diarrhoeal diseases linked to poor water quality (Lynas 2011:141). It has been estimated that by 2025 about 25 of Africa’s 55 countries would face water stress.

Half of the people in sub-Saharan Africa already face challenges relating to access to safe water and about 41% struggle with access to adequate sanitation (Clarke 2002:114). Predictions indicate that by 2025 about two thirds of arable land in Africa will be lost and decreased rainfall could impact yields of rain-fed agriculture by up to 50% due to climate change (Hisas 2011). This is mainly due to global warming and the unpredictability of weather conditions that are related to this.

In this respect South Africa is no exception. The country is facing serious problems relating to water scarcity and the management of available water resources. In 2009 the then South African Minister of Water and Environmental Affairs, Buyelwa Sonjica (2009), stated that: “There has been an increase in demand for water and also an increase in incidents of water pollution from industry and failing municipal infrastructure. By taking this resource for granted, we will be compromising the environmental, social and economic objectives that this generation and future generations can ever dream to achieve.” The country’s water problems are thus not only restricted to scarcity, but also associated with the pollution of existing water resources.

The successful management of water resources will depend on the political will of politicians to make decisions that are future orientated and not purely economic or politically expedient. Water management is a political issue that can not be isolated from other issues that determine the future well-being of our planet. It is however a crucial element to sustain human life on earth and, as such, it has a greater potential to become an immediate source of political conflict. Hydropolitics also has to integrate issues that affect our water resources, such as acid mine drainage and waste water management, agricultural practices, the management of our dams, rivers and streams, as well as water utilisation and sanitation.

4.1 Mine drainage and waste water management

Historical and current pollution by South Africa’s mining sector, specifically coal and gold mining, and the continued dependence on these resources to meet the country’s energy and economic needs, are affecting our freshwater supplies. Furthermore, eutrophication, arising from particularly poorly operating domestic wastewater treatment systems, is contaminating our water resources and thus rendering them sterile. This could pose a serious threat to aquatic life forms. South Africa’s economic activities and the inability to decontaminate water that is polluted with effluent resulting from mining and other economic activities poses a major threat to the countries water resources (Turton 2008:16).

A recent report by the Inter-Ministerial Committee on Acid Mine Drainage (AMD) indicates that South Africa is facing serious problems relating to AMD. The remedial action required to avert a crisis will be ongoing and very costly. Pumping costs to maintain water levels in the Western and Central basins in the

Witwatersrand are estimated at between R8,8 million and R12,8 million for the capital expenditure depending on the number of sites, and the operating costs are estimated at R35 million per annum. Treatment costs for the neutralisation plants are expected to cost R160 million for capital expenditure and annual operating costs about R41 million. The maintenance of the pumping and treatment infrastructure in the Eastern basin at the Grootvlei Mine are R3,7 million per month (2010:97-99). These costs are indicative of the magnitude of ADM problems in the Witwatersrand.

4.2 Agricultural practices

Since about 70% of water worldwide is used for irrigation, the cultivation of drought resistant crops has been an important enhancement. The use of more water efficient irrigation systems will require both skills and discipline (Martin 2006:93). Other aspects such as animal management for meat production, are also important. Not only does animal farming use a great deal of water and land for food production, but also has an effect on methane emissions. Up to 35% of the world’s cereals are used for animal feed (Hisas 2011:14). Given in Table 2 is a comparison of the water footprint of a range of food products.

TABLE 2: HUMAN WATER FOOTPRINT

Water used (in litres)	Product
300	1 litre of beer
1 000	1 litre of milk
1 600	1 kilogram of wheat bread
1 800	1 kilogram of cane sugar
2 500	1 kilogram of rice
10 000	1 kilogram of cotton (pair of jeans)
15 400	1 kilogram of beef

(Hoekstra AY and Chapagain AK 2011)

As society becomes more aware of the impact of food production on water resources, so too will the need arise for these aspects to become more regulated and for the agricultural sector to adjust to new demands by consumers.

4.3 Management of dams, rivers and streams

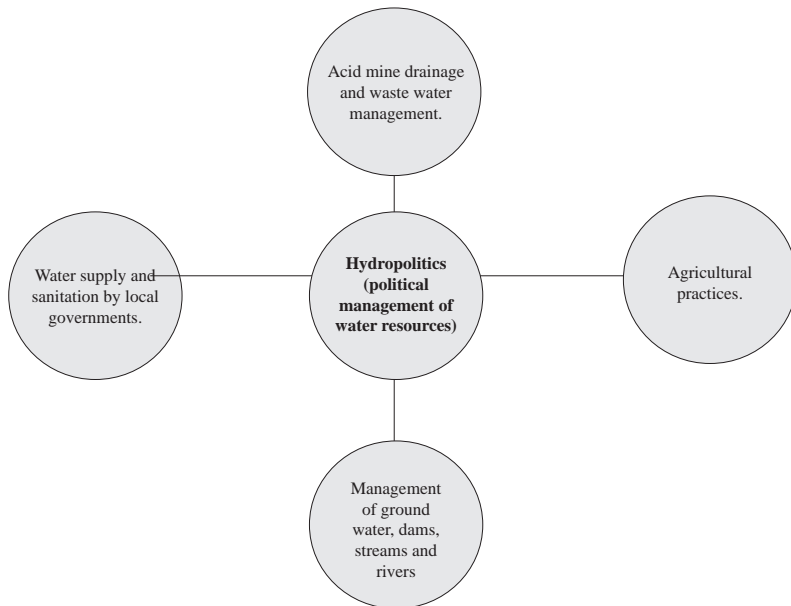
Dams, rivers and streams are the main sources of fresh water resources and are thus affected by the ineffective management and pollution of our water resources. Each one of these sustains ecosystems that support life forms that are crucial to a healthy environment. All other aspects relating to water management eventually connect to these sources of water. The World Bank has indicated that, while the world’s population has more than tripled, the usage of water has increased sixfold

(UNPO 2010:7). South Africa is running out of suitable sites for new dams. Most rivers in the country are already over utilised and regulated in attempts to improve water security, with 70% of the total runoff being stored in dams across the country. Small dams are also creating catchment related problems for the larger dams (Nel 2010:26). This could require drastic steps such as the removal of smaller dams in order to secure the catchment for the countries 569⁴ larger dams (in excess of one million cubic metres).

4.4 Potable water supply and sanitation

Water utilisation and sewerage management are political issues that form part of the development and implementation of policies and legislation aimed at managing our natural resources. As one of the most important resources, the management of water is central to politics and future political conflicts. It is within this context that local governments are failing, mainly as a result of capacity and human capital (skills) problems.

The linkages are illustrated in the following diagram:



4 Oberholster 2010:14.

5. HYDROPOLITICS AND INSTITUTIONAL CAPACITY OF LOCAL GOVERNMENTS

Central to hydropolitics in South Africa is the ability of state institutions to react to conflict surrounding the delivery of services for domestic use, especially at a municipal level. In this respect both scarcity and pollution of water resources are playing crucial roles. Jankielsohn (2011: 9) indicates that water scarcity in South Africa is aggravated by the inability of municipalities to manage existing water resources. The most pressing problems facing municipalities are the following:

- Poor operation and maintenance of sewerage treatment systems that pollute rivers, ground water, dams and streams. One of the main reasons for this is the mass installation of waterborne sewerage systems without ensuring the availability of adequate water supplies.
- The wastage of water due to poor maintenance of infrastructure resulting in large physical losses that have to be carried by ratepayers.
- The lack of information regarding the metering of water by residents and authorities.
- The shortage of technical and management skills in municipalities necessary for the effective management of available water resources and sewerage systems.

A clear example of the above factors is found in Mangaung which became a Metro Municipality (city status) in 2011. A Mangaung municipal water monthly balance report indicated that the municipality lost an average of about 2 593 529 kilolitres of purified water per month in 2010. This implies that the metro is paying more than R25 million per month or R850 000 per day for water being lost due to unrepaired leakages, illegal connections or poor maintenance (Botes 2012:1).

Most municipalities in South Africa do not have the adequate infrastructure to deliver reliable water resources. Many of the problems in connection to water services are related to the costs of replacing neglected infrastructure as well as provision of infrastructure to new households due to population growth, and not mainly due to backlogs caused by previously unserved South Africans. National Treasury has indicated that the current value of the replacement of municipal water services capital stock is estimated at R103 billion for water and R66 billion for sanitation (Wall 2010:41).

Migdal (1988:4) indicates that the differences between strong and weak states are defined by the capabilities of states to achieve certain changes in society. Such capabilities include their capacities to penetrate society, regulate social relationships, extract resources and ensure the appropriate use of resources in

determined ways. “Strong states are those with high capabilities to complete these tasks, while weak states are on the low end of a spectrum of capabilities.”

In this respect most provincial and local governments in South Africa are becoming increasingly weak. This poses a danger to the democratic order. If the current political order is unable to react positively to the increasing demand for water as both a requirement for human habitation and economic activity, then it will increasingly experience problems of legitimacy which still appears to be a mitigating factor to conflict and violence (refer to Table 1).

Conflict and violence, resulting from ineffective management of material and non-material resources, is not unique to South Africa. All developing states have to cope with various stresses placed on the political system and the state. In most instances this stress is created by the ability of the state to deal with various criteria relating to political change. Duvenhage (2003:51) outlines these criteria as follows:

- control over the territory of the state,
- supervision (not necessarily control over) national resources,
- capacity regarding the ability to generate and collect taxes,
- the development, improvement and maintenance of infrastructure,
- the ability to deliver services, and
- the maintenance of structures and practices associated with good governance and administration.

The above criteria are already problematic areas within local governments in South Africa. The resulting social tension is a threat to political stability in most municipalities in the country.

In his work *Prospects for democratic development in Africa*, Diamond (1997: 10-11) warned: “The more rapidly population growth and environmental decay proceed, the more they will undermine the ability of fragile African states to cope with all the challenges they face, not the least maintaining political order.”

Bureaucracies are crucial in determining the state’s ability to react to pressures from society and thus maintaining political order and stability. Bureaucracies are the apparatus that have to implement the decisions of politicians. If they are ineffective and weak, then politicians are seen to be ineffective and weak. Reforms aimed at improving the capacity and skill of bureaucracies are often limited to speeches and press releases and in many instances some reshuffling of personnel (Palmer 1989:259-285). In terms of water management, bureaucracies require skilled personnel to implement the policies and decisions necessary to secure adequate and safe water supplies to residents of cities and towns.⁵ Oberholster

5 Compare with Swanepoel and De Beer (1997:59-61).

(2010:9) supports this with the comments: “A large proportion of water sewerage emanating from South African urban areas is not treated properly prior to discharge, because the sewerage systems are incomplete or broken, or sewerage treatment plants are overloaded and mismanaged.” He goes on to state: “With a growing population and increased urbanisation, coupled with the apparent inability of most local authorities to effectively treat urban and industrial effluents to the promulgated effluent standards, the situation will continue to worsen.” This lack of capacity to supply secure and safe water to communities will inevitably lead to political conflict. Water is not only a primary resource necessary to sustain plant, animal and human life, but also a basic social necessity or input required to sustain economic activity and growth.

6. HYDROPOLITICS AND HUMAN CAPITAL

There are legislative processes in place in South Africa to deal with issues of water management, such as the Constitution of the Republic of South Africa (Act 108 of 1996), the National Water Act (Act 36 of 1998), the Water Services Act (Act 108 of 1997), the Environmental Management Act (Act 107 of 1998) and the Water Service Regulations and the National Water Resource Strategy. In addition to this there are over 30 multilateral agreements signed between South Africa and neighbouring states (Jacobs 2010:19).

It is however the capacity to implement such legislation that is often more problematic. In this respect Oberholster (2010:13) states that deteriorating water quality management efforts have the potential “to pose great social, economic and environmental risks for the country as a whole”.

Human capital is central to the service delivery debate in South Africa. Appointments in positions that require specialised skills, such as engineers and technicians, have often been carried out on a political basis. The decline of infrastructure and management capacity within the public sector are slowly eroding the democratic political order.

When politicians are put under pressure by their voters, their default position becomes what Migdal (1988:207-208) refers to as the “politics of survival”. In this respect Migdal indicates that non-merit appointments are a key method of ensuring the survival of leaders based on personal loyalties rather than the ability to carry out their tasks. This impacts negatively on government’s ability to supply services that require specialised technical skills, since political survival skills often take precedence over this.⁶

6 The African National Congress (South Africa’s ruling party) have implemented a policy of “democratic centralism” (often referred to as the cadre policy), in terms of which appointments in the public sector as well as in other sectors of society should be filled with ruling party cadres

In 2004 South Africa had a total of about 15 000 engineers, technologists and technicians. Only five per cent of these were employed by the national and provincial governments and 11 per cent by municipalities. In his analysis of these statistics Turton (2008:12) indicates that fewer engineers are being produced than those who are leaving the profession due to affirmative action and employment rules. Many have even left the country due to these disincentives hindering the retention of skilled engineers.

It is clear that politics plays an important role in the erosion of the human capital of the public service, to the extent that it is not able to effectively manage the increased demands for basic services in towns and cities. The ageing infrastructure, together with increased demands of urbanisation, is placing strains on current water related infrastructure that is already collapsing in many municipalities. Many residents of towns such as Brandfort, Wesselsbron, Marquard and Ficksburg are regularly without water for days at a time. At the same time sewerage systems are unable to deal with stresses of increased water-borne sewerage. In many instances raw sewerage is polluting existing fresh water resources. Managing this situation requires technical knowledge and skills that are no longer available in most bureaucracies of local governments. In this respect Wall (2010:43) states *inter alia*: “The failure of many municipalities to deliver a reliable, sustainable service is mainly due to poor leadership, inadequate budgets, and inadequate skills and experience.”

While South Africa’s relatively stable economy has not improved the economic prospects for the majority of people in the country, it has increased expectations of improvements in the lives of citizens. Huntington (1991:69) warns that increased expectations, together with visible inequalities, could create stresses and strains in the social fabric of society that stimulates political mobilization and increases demands for greater participation.

The greatest threat to a political order arises when the perception is created that democratic (participatory) governments are unable to meet the needs or expectations of citizens. When such a perception becomes a reality, then these threats become the source of political conflict and violence. This has serious political and economic implications for a country and endangers the whole political system.

Access to water in South Africa has improved considerably over the past 15 years. However, it is the quality of water that is increasingly becoming a cause for concern. In 2005 the Department of Water Affairs began a water quality regulation programme to improve tap water quality through monitoring and compliance. Surveys have, however, shown that many municipalities do not monitor drinking

who are loyal to the political agenda of the party. Factionalism within the party, however, has created the problem that internal party conflicts manifest themselves in bureaucracies, often rendering them impotent (Jankielsohn 2004:9).

water as required by law. The Blue Drop certification programme was implemented in 2008 to monitor the ability of municipalities to treat, manage and monitor drinking water. Similarly the Green Drop certification measures the performance of municipal waste water systems. The findings of the 2010 Blue Drop assessment is given in Table 3.

TABLE 3: NATIONAL BLUE DROP PERFORMANCE 2010

Performance	Scores required for performance	Proportion of municipalities obtaining the performance
Excellent	More than 90%	13%
Very Good	75%-90%	12%
Good	50%-75%	30%
Needs attention	33%-50%	21%
Needs urgent attention	Less than 33%	24%

(Kane-Berman J (ed.) 2010: 547-548)

The Blue Drop programme also indicated that while 72, 2% of households in South Africa had access to functioning basic sanitation facilities in 2009, 18,4% of waste water treatment plants in municipalities have high risk profiles that require urgent interventions. The municipal Green Drop performance for 2009 indicated that only 45% of the waste water systems measured against the set criteria achieved 50% (Kane-Berman 2000:552-554).

During April 2011, service delivery protests in Ficksburg and Mequeng in the Setsoto Municipality in the Free State Province led to the death of a community activist, Andries Tatane, who was shot by the police (Anon. 2011). An investigation launched into the reason for the protests provide an interesting case study on the linkages between water and sanitation issues and violent political protests. The commission of enquiry indicated that the upgrading of the water treatment plant was not prioritised by the municipality in line with the demand (expectation) for the increase in demand for potable water. Furthermore, bucket eradication projects, aimed at providing water-borne sanitation in various areas, were not completed by contractors. It was found that serious supply chain management and monitoring problems exist in the management structures of the municipality. The municipality did not have a Director of Technical Services and also failed to respond to professional advice (COGTA 2011:7-14). The findings of the commission clearly indicated how the lack of institutional and especially technical capacity affects the delivery of adequate safe drinking water to residents of municipalities. Since Ficksburg borders on the Caledon River, water scarcity in the area is purely due to lack of capacity to provide the necessary infrastructure to treat, supply and manage water and sanitation issues in the municipality. The case of Setsoto is a blueprint for

what can increasingly be expected to become part of the political dispensation in South Africa.

7. CONCLUDING REMARKS

The holistic political management of water as a scarce resource is crucial to the future stability of South Africa's political order. The mobilisation of support, often in the form of protests, is key to redefining hydropolitics. Central to this is both the capacity and skills that are required by local governments to achieve the outcomes of securing adequate and safe water for local communities, while at the same time ensuring long term sustainability of water resources. If adequate attention is not given to this in the immediate future, South Africa's democratic political order will face serious issues of legitimacy and threat.

The right to sufficient and safe water, which is enshrined in the country's Constitution, will have to be prioritised by government. It is not enough to make politically correct statements regarding environmental and water related issues without enforcing sometimes unpopular policy and legislative requirements. The acknowledgement of a problem at a political level, however, is often the first step in mitigating the consequences. The damage carried out by industry, agriculture and government to South Africa's water resources requires decisive and consistent implementation of the policy and legislative framework by all spheres of government. While the legislative framework is in place, enforcement remains problematic. Issues relating to capacity and skills must become integrated into the discourse on hydropolitics. Local government institutions will have to show a greater commitment to dealing with water related issues.

Future policy or legislative approaches will inevitably also have to include adjustments in life styles of citizens to accommodate water scarcity resulting from increased demand and poor management of water resources. In Bangladesh, for example, floods and cyclones have changed eating habits of people causing an increased production of potatoes to substitute rice. Alternative sources of protein to meat and milk such as legumes will increase. Legumes are already a greater source of food for developing countries (Hisas 2011:40).

Education is also an important part of water management. In 2010 the Minister of Water and Environmental Affairs, Buyelwa Sonyica (2010:1), stated: "Education is also essential in ensuring that our people understand the importance of water and why the scarce resource should be used sparingly and not wasted. South Africa is of the 30 driest countries in the world and economic growth and climate change will reduce the already limited water we have available. Water is so scarce and precious that for years it has been predicted that the next world war will be fought over water."

It is however clear that increases in conflict and violence at local government level over water related issues is a greater probability in South Africa than any possibility of external conflicts. In this respect hydropolitics is crucial to current political and academic discourse within this sphere of government. Politics can not get more local than access to a safe and sufficient supply of water in our taps.

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