

Some, for all, forever
***A Case Study of Participation in Water Management in South Africa's
Umgeni River Catchment***



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Elizabeth Lorimer

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Signature of Student
Elizabeth Lorimer

Signature of Supervisor
Patricia E. Perkins

Abstract

South Africa is a water scarce country where freshwater resources are unevenly distributed in relation to the majority of its people. Integrated water resources management, which takes in all competing interests for water use, is crucial. In 1998, South Africa enacted the National Water Act, which created a progressive framework for water management in the country that promoted equitable and sustainable use of water resources. By equitable, the Act set out to repeal the discriminatory water policies of the apartheid era, which restricted access and allocation of water resources to black and Coloured South Africans. The main approach through which this would be achieved is public participation and a decentralized approach where decisions are delegated to the catchment level, through a catchment management agency. Several public forums, intended to initiate participation and identify key stakeholders towards the establishment of an agency, support these bodies. Since 1998, only two of the 19 proposed catchment management agencies have been established.

This case study of one catchment management forum along the Umgeni River in Northeastern South Africa, analyzes this trend of institutionalization and evaluates participation in light of promoting National Water Act's goals of redressing past inequalities. The case study illuminated that there is strong participation in the catchment related to the environmental concerns of the River. However, the degree to which participation in the forum addressed the social concerns within the catchment in relation to water use and allocation was less evident. The study concluded that reimagining how we organize and perceive participation in democracy is key as water management in South Africa moves forward.

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Foreword

This research paper was undertaken in partial fulfillment of the requirements for the degree of Master in Environmental Studies. The paper is a reflection of my Plan of Study's area of concentration, *Participatory Urban Water Governance*, in which I aimed to explore the intersection of three main topics: participatory governance, water resources management, and environmental planning. This paper focuses mainly on the first two components in greater depth. My specific learning objectives, which are addressed in this paper include:

- Become familiar with the application of participatory governance in cities in Canada and the developing world, as it relates to water governance.
- Become familiar with models of water resources management, such as watershed councils, Integrated Water Resources Management (IWRM), etc.
- Develop an understanding of the relationships between communities, civil society, industry, and government as it relates to water resources management.

The fieldwork and prior coursework undertaken allowed me to explore the use of participatory approaches in the management of freshwater resources. I critically examined the institutions and frameworks for water management, such as Integrated Water Resources Management (IWRM) and national water strategies, and explored how participation features within them.

I completed coursework in relation to this research, including two independent reading courses on water resources management and participatory governance. This paper and related fieldwork in South Africa allowed me to explore participation in water governance at the local level. I was able to apply the theories and concepts of participation and participatory governance to examine the role of local water management bodies.

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List of Acronyms

CCS – Centre for Civil Society at the University of KwaZulu Natal

CMA – Catchment Management Agency

CMF – Catchment Management Forum

DANIDA – Danish International Development Agency

DUCT – Duzi-Umgeni Conservation Trust

DFID – Department for International Development (UK)

DWA – Department of Water Affairs

DWAF – Department of Water Affairs and Forestry

ICM – Integrated Catchment Management

IDRC – International Development Research Centre

IWRM – Integrated Water Resources Management

MNR – Ministry of Natural Resources

NGO – Non-governmental Organization

NWA – National Water Act

PRA – Participatory Rural Appraisal

UEC – Umgeni Estuary Conservancy

UKZN – University of KwaZulu Natal

UN – United Nations

WUA – Water User Association

WMA – Water Management Area

1 Introduction

Some, for all, forever. With this slogan, South Africa's Department of Water Affairs set out in the late 1990s to radically change the country's discriminatory water policies from the apartheid era. The slogan sums up the Department's goals of access to a limited resource (some), on an equitable basis (for all), in a sustainable manner, now and in the future (forever) (DWAF, 1997). The government changed the legal framework for water service delivery and water resources management to reflect these goals. The National Water Services Act (NWSA) of 1997 provides the rights of access to basic water supply and basic sanitation for all South Africans (Republic of South Africa, 1997). In addition, the National Water Act (NWA) of 1998 aimed to fundamentally reform the "past laws relating to water resources, which were discriminatory and not appropriate to South African conditions" (Guide to the National Water Act). At the centre of the NWA was the recognition that public participation in water management would bring about the goals of 'some, for all, forever'. Through public participation, it is believed that those "previously disadvantaged" by the country's water laws would be considered and brought to the table as active participants in the management of their own resources. The South African government developed a series of institutions and frameworks through which it was hoped this participation would occur. On paper, the main tenets of the National Water Act sounded forward thinking and innovative. However, fourteen years after the enactment of the NWA, the country continues to struggle with the implementation of the Act's main components. By examining one case study, I have explored some of the reasons why participatory water governance is so challenging in South Africa.

The institutions, through which water management activities occur, subject participation to certain conditions and parameters, all of which combine to create an institutionalization of participation. The main question guiding this study is how does the way participation is institutionalized in South Africa's water management policies shape participation in catchment management forums. In other words, how has institutionalization of participation through South Africa's National Water Act, and the other associated frameworks such as Integrated Water Resources Management (IWRM), shaped the way that participation in water management actually occurs in the country? Through a case study of the Umgeni River Catchment in KwaZulu Natal, this study examines participation at the most local level of water management, the catchment basin, where participation at the grassroots is initiated. Institutionalizing participation has legitimized the need for gender representation and representation from disadvantaged persons and communities¹ to redress past inequalities and created a legal space for participation to occur. However, this institutionalization has failed to address some of the key barriers of participation for marginalized people, such as women and the economically disadvantaged. As Ken Conca states, "IWRM thought and practice lionize the themes of participation and valuation, but provide only abstract guidance on appropriate ways to realize those values" (Conca, 2006). In this study, I discuss these barriers and the lack of clear guidance on how to move forward in addressing the values within the National Water Act.

This paper begins with a policy analysis and history of the evolution of water rights and laws in South Africa to provide context on the country's previous

¹ The National Water Act, 1998 defines "disadvantaged persons and communities" as those which in the past have been prejudiced by racial and gender discrimination in relation to access to water.

discriminatory water laws, which restricted access to and use of water, and how these laws were repealed after the democratic transition in the 1990s. This history is followed by a literature review on Integrated Water Resources Management, participatory water governance, and the institutionalization of participation globally and through the NWA. In the third section, I introduce the case study and provide background on the Umgeni River catchment, followed by an explanation of my detailed research questions, initial methodology, and what actually occurred while I was in Durban. I conclude with my findings in relation to other supporting research on participation and water management in South Africa.

2 Literature Review & Policy Analysis

2.1 A History of South Africa's Water Laws and the Hydrology of Apartheid

In all countries, human access to water for drinking, sanitation, irrigation, industrial, mining and other uses is mediated through a system of custom and law. Until the development of the National Water Act in 1998, water laws in South Africa were largely based on government control over access to “public” water and later riparian rights. These laws created unequal access to water between the ruling white population and the majority black, Coloured, and Indian populations. Unequal access to water through these discriminatory laws and policies created a “hydrology of apartheid” in South Africa and its roots can be traced to before the apartheid regime (Conca, 2006). According to Ken Conca, the “racial dimensions of water-related power and inequality did not originate with the formalization of the apartheid system after World War II” (2006: 323). These racial dimensions manifested themselves long before then, from the

first colonial presence in the region. The direction of water rights in the country was dependent on which colonial or apartheid power was in control at the time.

The country's history of colonial rule began with the Dutch settlers who came in 1652. The Dutch "brought with them a legacy of Roman and Dutch water law, including well-institutionalized distinction between public and private water" (Conca, 2006: 319). At this time, "the doctrine of state ownership of all public rivers was generally accepted" (Tewari, 2002). Tewari (2001) further explains that the initial development of water rights in South Africa was "largely hinged upon Roman-Dutch law in which rivers were seen as being resources which belonged to the nation as a whole and were available for common use by all citizens, but which were controlled by the state in the public interest." In this case, the Dutch East India Company, representing the state, assumed *dominus fluminis* (overall rights of control) over the water resources of its colonies (Malzbender, Goldin, Turton, & Earle, 2005). As Tewari (2001) describes it, "in this period individuals only held temporary and revocable rights to water where such rights did not undermine [the Dutch East India] Company access to water." The decision on who could obtain these rights is connected to the beginning stages of white supremacy, which Lieberman argues "was mobilized as the basis for social and political organization almost from the day the Dutch East India Company representative Jan Van Riebeeck landed at the Cape of Good Hope in 1652" (Conca, 2006: 323). Around the late 18th century, the French invaded the Cape region, defeated the Dutch and the Dutch East India Company eventually went bankrupt. The British moved in to take the Cape colonies from the French and establish an important port for British merchants en route to Australia and India.

The second period in the evolution of South African water rights was marked by British rule, and later the period of Afrikaner rule, until the democratic transition in the 1990s. During British rule in the 19th century, water rights were imposed with English law, which favoured the riparian principle, “in which rights to water use in a watercourse passed from the public sphere to the owner of the adjoining lands” (Conca, 2006: 320). The consequences of riparian rights meant that access to water was connected directly to land tenure. Water rights began to move from a system of state control to one that favoured individual ownership. Racial segregation was already evident under Dutch and British control and opportunities to own land fell mainly into the hands of the European colonists.

British rule ended in the early 20th century with the outcome of the Boer Wars and a series of negotiations which led to the formation of the African Union in 1910. However, South Africa continued to be under the dominion of the British Empire until 1931. The African Union maintained a system of riparian rights and the rights to own land were further restricted when the Natives Land Act was introduced in 1913. The Act designated certain areas that could be owned by the “native” population and became one of the first and lasting pieces of the apartheid legislation.

Two years after the formation of the South African Union (1910), the Irrigation and Conservation of Waters Act, 1912 was enacted. Agriculture had always been a major sector of the economy. As Tewari (2001) explains, irrigation development “played a major role in the molding of early water policy as well as in the infrastructure, economic and social development of South Africa.” Irrigation became the basis on which water was managed and the state again exercised *dominus fluminis* to ensure that water was

being allocated effectively for irrigation purposes. However, as the country began to industrialize, the “Irrigation Act...became inadequate to cope with the social and industrial progress of the nation” (Tewari, 2001). This eventually led to the formation of the Water Act of 1956. Ken Conca states that the two main thrusts of this law were to “greatly expand the power of the state to allocate water” and to give industrial water uses more prominence under the law (2006). This new Act was meant to respond to the rapid industrialization and expansion of mining and other industries in the country. This period also saw the rise of the apartheid regime, so “the new law...promoted the segregation of development on different paths for the different races” (Tewari, 2001). Apartheid as an official policy was introduced in 1948. As Conca argues, “racial discrimination is explicit in the 1956 water act” because access to water was “derived from the two most important institutions of the apartheid system: racially discriminatory land laws and the intervention of the racially discriminatory state.” The land markets favoured white farmers and the poorer black and Coloured populations could not compete as freely in these markets in order to gain riparian access to rivers, for water use.

The democratic transition in the 1990s and the fall of the apartheid regime brought about the third period in the evolution of water rights in the country. Apartheid was dismantled over the course of three years from 1990-1993 and culminated with the 1994 election. A new Constitution was adopted in 1996-1997 and paved the way for the transformation of water policy in the country by making several provisions for the right to life, water and food for all South Africans. The main thrust of this period, as described by Tewari, was to “facilitate the access to water by communities which were ‘previously

disadvantaged'² by the deliberate segregating policies of the past" (2001). This aim is evident in the development of the National White Paper for a Water Policy in South Africa (1997) and the subsequent National Water Act. Furthermore, as Conca describes, "there are several explicit constitutional references to the need for affirmative action in light of past discrimination" (2006). The new Constitution created a legal platform for all South Africans to assert their right to water. The South African Constitution allocates the management of water resources to the National Government and the management of water and sanitation services, for all citizens, to municipalities or local governments.

2.2 White Paper on a National Water Policy for South Africa

In the 1994 national election, Dr. Kader Asmal was elected to the National Assembly and became the first Minister of Water Affairs and Forestry after apartheid in the new democratic South Africa. Kader's first task as Minister was to develop a White Paper on a National Water Policy for South Africa (hereafter referred to as the *White Paper*). The White Paper was intended to review the discriminatory water laws of the past and address some of the ongoing challenges facing the state with regard to water management (i.e., population growth, urbanization, etc.). The new vision for a water policy in the country was summed up in the Department of Water Affairs and Forestry's slogan at the time, "some water, for all, for ever." The staff of DWAF adopted this slogan and committed themselves to ensuring the goals it reflected were met. The White Paper begins with a preamble written by poet Antjie Krog, which expressed the intent to redress past inequalities in water access. Krog states in the preamble that "with water we

² *Previously disadvantaged* refers to disadvantaged persons and communities which have been in the past been prejudiced by racial and gender discrimination in relation to access to water.

will wash away the past, we will from now on ever be bounded by the blessing of water” (DWAF, 1997). The negative effects that previous water laws had on access to water are emphasized and addressed throughout the white paper. For one, the White Paper stated that “the riparian system of allocation, in which the right to use water is tied to the ownership of land along rivers, will effectively be abolished” (DWAF, 1997). This meant that one’s access to water was no longer dependent on one’s land tenure. Second, the White Paper also proposed that “water use allocations [would] no longer be permanent, but [would] be given for a reasonable period”, under the discretion of the Minister (DWAF, 1997). Along with this provision came the introduction of the Reserve, which states that water which is “required to meet basic human needs and maintain environmental sustainability will be guaranteed as a right” (DWAF, 1997). This meant that other uses beyond the Reserve would need to be approved by the government and take into consideration public interest, transboundary arrangements, and water pricing mechanisms.

A third policy set forth in the White Paper was that the National Government would act as the custodian of the nation’s water resources. The White Paper recognized the limits to which the public can self-regulate its water use and thus the state must play a role in managing the public’s use of water. In recognizing these limits, the paper states that “water is too valuable a commodity for its management to be handed over to its users and there remains a vital role for external monitoring and enforcement” (DWAF, 1997). However, this would not come without its challenges with regard to the country’s administrative and monitoring capacity. Conca argues, “The White Paper emphasized...the legacy of apartheid in creating a lack of technical and managerial

capacity in South African government and society more generally” (Conca, 2006). For this reason, the White Paper mentioned that “active intervention” from the national Government would be required to “carry out water management functions and to build organization with the capacity needed” (DWAF, 1997). This would require a transformation of the Department of Water Affairs and Forestry and require the use of new governance models.

The White Paper also recognized the weakness of the state in engaging the general population, particularly the “previously disadvantaged” black, Coloured and Indian populations, in water management decisions. In discussing the institutions for water management, the White Paper recognized that “neither the institutional structure nor the approach of [DWAF] allowed ordinary people to participate in decisions that directly affected their lives” (DWAF, 1997). This was due to the historical precedent of favouring water uses of the whites and the high illiteracy rates of the rest of the population, which prevented their access to information released by DWAF. With this recognition, among other things, came the proposal for catchment management agencies, which would “serve the interests of equity, corrective action and optimum use of water” (DWAF, 1997). This proposal aimed to engage stakeholders at a regional level, through catchment management bodies, and give them the authority to design a catchment management plan which would designate water use within the catchment. However, the White Paper did not discuss the logistics of how these agencies would be established and how they might begin to address the equity and corrective action issues. To better understand these institutions, we turn to the development of the National Water Act.

2.3 The National Water Act, 1998

South Africa's National Water Act (NWA), enacted in 1998, provides the current framework for water resources management in the country. The Act, which falls under the responsibility of the Department of Water Affairs (DWA),³ recognizes that water "is a scarce and unevenly distributed national resource" and that "the ultimate aim of water resource management is to achieve the sustainable use of water for the benefit of all users" (Republic of South Africa, 1998). The main intent, as iterated in the White Paper, is to redress past inequalities in access to water and do "away with old apartheid ideals of privileged access" (de la Harpe, Guide to the National Water Act, n.d.). This was accomplished by repealing "more than 100 prior water laws dating to 1914, including the Water Act of 1956" (Conca, 2006). Again, by emphasizing the importance that all South Africans have access to water for basic human needs, the Act ensures that water for basic human needs and the environmental function are guaranteed as part of the Reserve and are protected before all other allocated uses.

The National Water Act outlines the different water management institutions responsible for water management in the country as well as their specific functions. These institutions have binding obligations under the NWA and varying degrees of accountability for effective water management. There are three statutory institutions under the Act: the Minister of Water Affairs, the Catchment Management Agencies (CMAs) and the Water User Associations (WUAs). The first tier, the Minister of Water Affairs, formerly the Minister of Water Affairs and Forestry, has the overall

³ The National Water Act was enacted under the Department of Water Affairs and Forestry (DWAF). After the 2009 election, the Department of Water Affairs and Forestry was divided. The Department of Water Affairs (DWA) falls under the responsibility of the Minister of Water and Environmental Affairs.

responsibility for effective water management in the country. The Department of Water Affairs (DWA) is responsible for administering all aspects of the National Water Act delegated to it by the Minister, including the National Water Resources Strategy. The Act divides the country into 19 water management areas (WMA), geographic regions containing one or more major river catchments within which water resources are managed. Figure 1 illustrates the 19 water management areas along with international and provincial boundaries for South Africa.

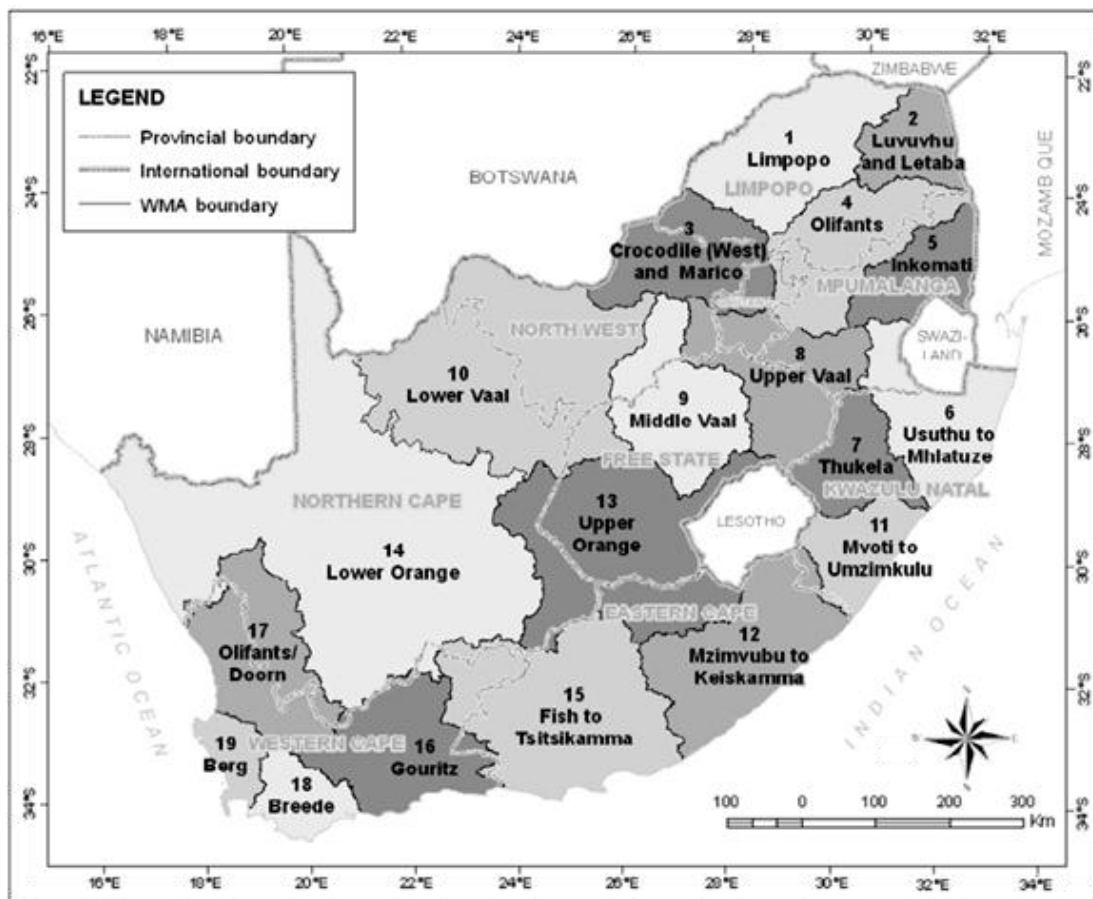


Figure 1. Map of the 19 water management areas designated in the NWA, 1998 (DWA).

Each WMA has its own body of accountability, a catchment management agency (CMA), which is the second tier of the institutional framework outlined in the NWA. Each CMA is responsible for the development and broad implementation of a

management strategy for its catchment. In theory, there should be one CMA for each of the 19 water management areas; however, since the NWA was enacted in 1998 only two catchment management agencies have been successfully established. These CMAs are located in the Breede WMA (#18) in the Western Cape and in the Inkomati WMA (#5) in Mpumalanga province in the northeast region of the country. In the case of the Inkomati, stakeholder engagement was already underway towards the development of a catchment management strategy when the National Water Act was enacted (Brown, 2010).

The third tier of the institutional framework outlined in the NWA is the Water User Associations (WUAs), which are “cooperative associations of individual water users who wish to undertake water-related activities for their mutual benefit” (de la Harpe, Ferriera, & Potter, n.d.). The Minister of Water Affairs, in accordance with the National Water Act, establishes WUAs. The purpose of these associations is for several water users to pool their resources in order to carry out water-related activities associated with the catchment management strategy developed by the CMA (e.g., construction, operation, and maintenance of waterworks needed for supplying water to land for irrigation, monitoring and recording water quantity and level of flow in watercourses, etc.). There can be several water user associations within one water management area and they can either be sectoral or multi-sectoral. For example, a sectoral WUA could be comprised of a group of all irrigation farmers, whereas a multi-sectoral WUA would have a combination of water users from the farming, forestry, mining and conservation, and even recreation sectors. WUA are only established if the members are able to pay for the administrative costs of the association as well as operating and maintenance costs of any project they undertake. These funds are normally levied from water use charges on the

members. For example, a water user association of farmers would levy funds from each farmer to go towards the operating costs of an irrigation project. They may also receive financial assistance from the Department of Water Affairs or from a Catchment Management Agency. The level of funding from one water user association to another will vary.

The following table summarizes the three tiers and their specific responsibilities.

	Main Responsibility	Membership	Establishment	Funding
First tier Minister of Water Affairs & Department of Water Affairs	<ul style="list-style-type: none"> - Overall Responsibility for effective water management - Controls water use regionally through registration of water uses according to different levels use through authorizations and licenses - Responsible for developing a pricing strategy for raw (untreated) water/the use of a water resource and charges set by CMAs. Does not apply to treated water supplied in bulk and distributed to households (this is dealt with under the National Water Services Act) - Administer all aspects of the National Water Act delegated to it by the Minister or Director-General 		Minister appointed by the President	Federal Budget
Second tier Catchment Management Agencies	<p>Each CMA is responsible for the progressive development and broad implementation of a catchment management strategy and promoting community participation.</p> <p>They may have additional powers and duties delegated or assigned to them by the Minister (e.g., establish rules to regulate water use, control or limit use of water during periods of water shortage, etc.)</p>	Governing Board of the CMA must reflect all the various stakeholders and water users in the water management area.	<p>Phase 1 – Initiate participation in the WMA through <i>catchment forums</i></p> <p>Phase 2 – Establish <i>Catchment Steering Committee</i> which develops CMA establishment proposal</p> <p>Phase 3 – Establish the CMA</p>	<p>A CMA can be funded from:</p> <ul style="list-style-type: none"> - Water use charges made in the WMA, from pricing strategies - Money from grants or loans - Money appropriated by Parliament
Third tier Water User Associations	<p>Acts as a mechanism through which the catchment management strategy can be implemented at the local level.</p> <p>The main roles and responsibilities of a WUA are described in its constitution and may include:</p> <ul style="list-style-type: none"> - Preventing unlawful water use, restoration projects, investigating and recording water quantity, constructing, operating and maintaining waterworks for irrigation or land drainage, etc. 	<p>Individual water users that want to pool their resources to carry out water-related activities (e.g., small scale farmer, irrigation farmer, mining sector, forestry sector, nature reserve, etc.)</p> <p>WUA can be sector based or multi-sector based.</p>	<p>Any category or group of water users may submit a proposal to the Minister for the establishment of a WUA.</p> <p>Established by the Minister according to procedures set out in the NWA</p>	<p>The WUA is responsible for the administrative costs of the WUA as well as the operation and maintenance costs of any capital works associated with the WUA.</p> <p>WUA is normally funded through charges levied on its members called <i>water use charges</i>. DWAF can provide financial assistance to historically disadvantaged groups who are WUA members</p>

Figure 2. The Water Resources Management Framework as outlined in the Guide to the National Water Act (de la Harpe, n.d.)

In addition to these institutional statutory⁴ bodies, the Act also refers to the process of initiating participation through bodies such as catchment forums and catchment steering committees, which are non-statutory. Catchment forums may be formed to support the establishment of a CMA, and tend to play an institutional development and consultative-advisory role to the Department of Water Affairs (de la Harpe, Ferriera, & Potter, n.d.). A catchment steering committee is established to investigate and develop the proposal for establishing the CMA and represents all stakeholders within the water management area, such as water user associations, community based organizations, municipalities, and more (de la Harpe, Ferriera, & Potter, n.d.). The catchment steering committee would normally be dissolved once the CMA is established.

However, the catchment forums exist before and continue on after the CMA is established. There are several catchment forums within a single catchment and even more in a water management area. The catchment forums are considered to play a vital role in initiating participation towards the establishment of the catchment management agency. They are involved in the first phase of the establishment process where the main purpose is to develop “trusting and constructive relations between all the stakeholders and interest groups” (de la Harpe, Ferriera, & Potter, n.d.). These forums are the focus of this paper as they are the first step in initiating participation towards equitable and sustainable water management. They are the first point of contact between the public and the Department of Water Affairs.

⁴ The Department of Water Affairs, catchment management agencies, and water user associations are referred to as statutory bodies because they have designated authority and binding obligations under the National Water Act.

The NWA is lauded as a progressive piece of legislation that repealed the discriminatory water policies of the past and encoded the right to water for all South Africans. However, while it was comprehensive in laying out a new institutional framework for water management, the Act does not explain how and through which mechanisms it will redress specifically the issue of past inequalities with regards to water management. The Act only makes reference to promoting community participation and ensuring representation of disadvantaged persons and communities on catchment management agency governing boards. As this paper unfolds, we will see how the lack of discussion on issues of redistribution and equitable use in the NWA may have limited the government's ability to promote strong and diverse participation in catchment management forums and agencies.

The Act takes a decentralized approach to water management, recognizing that the most effective way to manage water resources is by “delegating water resources management to the regional or catchment level” (Republic of South Africa, 1998). By including community participation, through the catchment forums, water user associations, and the CMA governing bodies, it is assumed that more equitable and sustainable decisions will result. Participatory governance, which will be discussed later in this chapter, tells us that people should have the power to make the decisions that affect their lives. The concepts of public participation in water management and making decisions on a catchment level are the foundations of Integrated Water Resources Management, an international concept which influenced the direction of South Africa's National Water Act and the institutions therein.

2.4 Integrated Water Resources Management (IWRM)

The Department of Water Affairs in South Africa adopted the principles of Integrated Water Resources Management (IWRM), a process for coordinated planning and management of water, land and environmental resources, with the establishment of the 1998 National Water Act. This section provides an overview of IWRM as a philosophy for water resources management and a critique of its application in the global south, and in particular South Africa. IWRM was broadly advocated following the 1977 United Nations Conference on Water in Mar del Plata, Uruguay. The Global Water Partnership defines IWRM as:

A process which promotes the coordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems (Global Water Partnership, 2000: 22).

According to Muhammad Mizanur Rahaman and Olli Varis (2005), the Mar del Plata conference was “undoubtedly a major milestone in the history of water resources development for the 20th century.” This conference included the participation of leaders from the developing world and produced a set of recommendations on the essential components of water management, such as water use and efficiency, natural hazards, health and pollution control, regional and international cooperation, and more.

The next major gathering to address water issues and IWRM occurred 15 years later at the International Conference for Water and the Environment in Dublin in 1992. This meeting served as a precursor to the UN Conference on Environment and Development in Rio that same year, known commonly as the Earth Summit. What emerged from the Dublin Conference were the four guiding principles of IWRM, which

were presented at the Earth Summit and later consolidated into Chapter 18 of Agenda 21 (Rahaman & Varis, 2005). The guiding principles outlined are:

1. Fresh water is a finite and vulnerable resource, essential to sustain life, development and the environment;
2. Water development and management should be based on a participatory approach, involving users, planners and policy-makers at all levels;
3. Women play a central part in the provision, management and safeguarding of water; and
4. Water is a public good and has a social and economic value in all its competing uses (Global Water Partnership, 2012).

There were several criticisms of the Dublin Conference. For one, the developing world was not represented, unlike at the Conference in Mar del Plata. Rahaman and Varis (2005) point out that the Dublin Conference was “a meeting of experts rather than an intergovernmental meeting” and “there was a lack of active participation from the developing world.” The lack of representation from the developing world made many water professionals question how the “principles [of IWRM] could be implemented in complex water management scenarios in developing countries” (Rahaman & Varis, 2005). Anthony Turton et al. note that “those countries with mature and long-standing democracies tend to be more conducive to IWRM as they tend to have a strong and well-established base of multi-disciplinary specialists who engage in management and other actions.” However, the same cannot be said in the Global South where democracies are younger and lack strong institutions (Turton, Hattingh, Claassen, Roux, & Ashton, 2007). Although this claim may not apply to *all* democracies in the Global South, and many

South Africans would debate being part of the “developing world”, I would argue that Turton et al’s claim does have some applicability to South Africa, where national democratic institutions are less than 20 years old.

Rahaman and Varis also point to indicators which limit the application of IWRM in developing countries, namely the issues of privatization and considering water as an “economic good”, the fourth Dublin principle. Water professionals in the developing world reject the fourth principle on the basis that “no water development initiatives could be sustainable if water was considered an economic good without considering the issues of equity and poverty” (Rahaman & Varis, 2005). The treatment of water as an “economic good” in South Africa has particular significance in the country. Patrick Bond explains that after the democratic transition in 1994, the country was immediately confronted by “international trends endorsing municipal cost-recovery, commercialization...and long-term municipal water management contracts...equivalent to privatization”, which priced water beyond the reach of poor households (Bond, 2011). Although, every South African is entitled to 25 litres of free water a day, under the Constitution, issues of pricing and cost-recovery continue to be a topic of debate as each household in most jurisdictions is responsible to pay for any use above that amount. Despite the National Water Act’s designation of a Reserve, which protects basic water resources for ecological function and basic human needs before all other uses, the adoption of IWRM principles and the idea of water as an “economic good” could be considered by many South Africans as a significant disconnect from their Constitutional rights.

Despite the critiques of the Dublin Conference, what emerged was the dominance of IWRM principles in the development of many national water management frameworks and strategies around the world. Conca argues, “IWRM has become *the* discursive framework of international water policy – the reference point to which all other arguments end up appealing” (2006: 126). He further argues that by the late 1990s, the idea of IWRM had “emerged as the dominant paradigm by which to view and discuss water policy issues in an international context” (Conca, 2006: 145). So it is no wonder that the philosophies of IWRM were adopted in South Africa’s National Water Act. Conca (2006: 345) argues that the NWA “continues the trend since the 1980s of a deepening emphasis on integrated water resources management.” For one, the Act developed a devolutionary approach for water management, which focuses on decentralized decision making and participation at the catchment level. The Act also emphasizes the need for participation, as IWRM recognizes that “people are part of the water resource and that a way of ensuring equal and sustainable use of the resource is... achieved through the participation of *all* people who are most affected by the resource” (Lotz-Sisitka & Burt, 2006). The assumption here is that people will develop a sense of ownership and responsibility for their water resources through participation in their management. Funke et al. (2007) also point to several reasons why IWRM is very necessary in South Africa, such as inequitable distribution of water, high variability and water scarcity, and the mismatch between the location of people and the available water resources. In their research on assessing the state of water resources management and catchment management agencies in South Africa, Heila Lotz-Sisitka and Jane Burt (2006) argue that if “people understand how they are integrally connected to their

resources they are more likely to adopt or even demand more sustainable practices.”

With regard to the NWA this intent is achieved through the establishment of catchment agencies and the promotion of community participation through catchment forums and steering committees.

IWRM principles are also reflected in the NWA’s aim to redress past inequalities with regards to South Africa’s water management. Lotz-Sisitka and Burt (2006) indicate that IWRM policies “aim to make water management more efficient and to promote equality through inclusion.” Here, participation is seen as a potential answer to redressing past inequality through inclusion of “previously disadvantaged” persons and communities in water management decisions. There are several aspects of IWRM’s implementation in South Africa that require a closer look. Rahaman and Varis point out that “although IWRM is the current buzzword of water resources development, future challenges remain in reducing the gap between theoretically agreed policies and implementation” (Rahaman & Varis, 2005). This gap between theory and practice is evident in the Department of Water Affairs’ ability to establish, to date, only two of the 19 catchment management agencies and strategies that were proposed in the 1998 National Water Act. Scholars of water resources management and supporters of IWRM, such as Pieter van der Zaag (2005), laud IWRM for its holistic approach. He explains that “IWRM means reconciling basic human needs, ensuring access and equity, with economic development and the imperative of ecological integrity, while respecting transboundary commitments” (van der Zaag, 2005). However, these same advocates of IWRM tell us that in practice the philosophy is exceedingly difficult to implement. Asit Biswas argues that IWRM sounds great on paper but in reality the definition of IWRM

“does not provide any real guidance to water professionals and policy makers as to how the concept can be operationalized to make the existing water planning, management and decision-making processes increasingly more and more rational and efficient” (Biswas, 2008: 10). Furthermore, Ken Conca argues that IWRM combines “intuitive reasonableness, an appeal of technical authority, and an all-encompassing character of such great flexibility that it approaches vagueness” (Conca, 2006). Van der Zaag asserts that there are institutional challenges and decision-making processes which create obstacles for the realization of IWRM (van der Zaag, 2005). In the case of South Africa, other factors such as entrenched racial inequality, limited institutional capacity, and ongoing socio-economic differences also factor in.

There is a lot in the literature on the benefits and challenges of IWRM, however less is known on how to move forward. In considering what the above scholars have written about IWRM’s applicability in the global South, there is a need to examine alternative forms of governance that may integrate goals of IWRM but also address the challenges related to equity, culture and race in water management. Participation is thought to be the approach through which these issues can be addressed, although as the following literature review on participatory governance reveals, participation does not come without its own challenges.

2.5 Participatory Governance - Assumptions, Power, and Social Change

For the last sixty years, participation has evolved and become a new paradigm for development. This section begins with an analysis of the evolution of participatory governance to illustrate how participation came to be seen as resolving many issues with development projects and how through time it became normalized and institutionalized

across other sectors. Through this process, I argue that some of its legitimacy has been lost. The latter part of this section discusses the assumptions made about participation and what this means for participation in practice.

Participation was initially regarded as a solution to development gone wrong. Lotz-Sisitka and Burt (2006) point out that “in response to the failure⁵ of development projects in the 1950s, social activists and field-workers began to advocate that the populations concerned in development projects should be included in the projects’ design and implementation.” The failure of these projects was always linked to the lack of involvement from the people in the decision-making process. The participation of local communities in the design and implementation of development projects was seen as the solution. Beginning in the 1980s, Robert Chambers became well known for his work on participatory rural appraisal (PRA), a method in which local populations identified their own problems, set goals and became active in the implementation and monitoring of their achievements. In his book, *Whose Reality Counts? Putting the First Last*, Chambers’ (1997: 103) states that PRA is about “changes and reversals – of role, behaviour, relationship and learning”, where outsiders “do not dominate and lecture; they facilitate, sit down, listen and learn.” Herein lays the aim of most participatory processes: to have people become involved in the decisions that affect their lives. Chambers and others can be credited with moving the participation agenda forward in international development.

Before long, participation became the norm in the development sector, as well as a

⁵ Development in the 1950s was mainly based on modernization theory in which traditional ways of doing things were discouraged and it was believed that countries could be brought to development in the same manner more developed countries have. This was achieved through industrialization and technological progress. This led to the emergence of dependency theory, which recognized that more advanced economies progress at the expense of less advanced economies. The result of many development projects during this time was a deepening of the gap between the developed and developing world.

keystone of democracy. Several international bodies and frameworks all mention the importance of participation, from Agenda 21⁶ to the Millennium Development Goals, and many development agencies have requirements around the use of participatory planning in their programming.

Despite the wide acceptance of participation as an appropriate method of rectifying failed development projects, criticisms have emerged on how participation has become normalized and institutionalized through international frameworks, such as Agenda 21 and IWRM. Through these frameworks, participation becomes organized and defined according to a number of conditions. Many argue that participation cannot be organized or managed because as Cleaver (2001: 42) describes it, “an organizational model of participation ignores the fact that many interactions between people also take place outside formal organizations, that the interactions of daily life may be more important in shaping cooperation than public negotiations.” By institutionalizing participation, in effect managing it and setting it to certain parameters, part of the interaction or conversation may be lost. Cleaver also points out that focusing too narrowly on “establishing new functional institutional mechanisms of participation may obscure the actual activities being undertaken by community members through other well-established, familiar, and locally adapted channels” (2001: 42). The work of local civil society and community-based organizations might not be recognized unless it is connected to the institutional process. Lotz-Sisitka & Burt (2006) argue that “the challenge lies with combining the complex, fluid process of participation with a structured system of management.” They further argue that “the act of participating is

⁶ Agenda 21, adopted at the 1992 Earth Summit, is a comprehensive plan of action to be taken globally, nationally and locally by organizations of the United Nations System, Governments, and Major Groups in every area in which human impacts on the environment (United Nations, 2009).

not something one can easily institutionalize or control” (Lotz-Sisitka & Burt, 2006). Institutionalization is the act of normalizing participation within an organization or framework and subjecting how it occurs to a set of parameters and conditions. This leads to someone or some group being in control of the participation process and ultimately shaping or deciding who participates and how. By institutionalizing participation, we have to deal with the consequences of power and control and how this may affect the quality and effectiveness of participation. In his research of participatory action research, Anisur Rahman (2003) explains that, “to control participation is a contradiction, as participation is a spontaneous act very different from organizations.” The development sector essentially turned to participatory governance because of its ability to capture the natural interactions between individuals and communities, but in so doing, participation lost its unpredictability, openness and sincerity.

In her paper on the limitations of participatory approaches in development, Frances Cleaver describes how participation became an act of faith in development based on three main tenets, which assume that “participation is intrinsically a ‘good thing’; that a focus on ‘getting the techniques right’ is the principal way of ensuring the success of such approaches; and that considerations of power and politics on the whole should be avoided as divisive and obstructive” (Cleaver, 2001: 36). Along with the second tenet, that ‘getting the techniques right’ will ensure success, is the assumption that participatory approaches are relevant and applicable to all situations regardless of context. Julia Brown (2010) refers to this as the implied universality of participatory approaches. With these three tenets, Cleaver laid out some of the fundamental assumptions of participatory governance. I would argue that there is yet another assumption of participatory

governance, which is that it is seen as a discursive practice and that by simply bringing people to the table to talk, achievements will naturally result (Lotz-Sisitka & Burt, 2006). The implications of these assumptions is that they neglect other factors that influence how people are able to participate or feel that there is space for them to participate. The following section discusses each of these assumptions, drawing on the experience of water resources management in South Africa.

In the same way that Robert Chambers (1997: 103) pointed out how participatory rural appraisal was “not a panacea, and will not solve all the problems of the world,” the same can be said of participatory governance. Cleaver’s first assumption that “participation is intrinsically good”, neglects any recognition of the barriers to participation, which may reinforce the inequalities that participation seeks to address. In South Africa, participation in water management is intended to resolve issues of inequality from past water policies which discriminated racially against the majority black, Coloured, and Indian communities. Secondly, assuming that by simply ‘getting the techniques right’ success is ensured, according to Cleaver, “fails to adequately address issues of power, control of information and other resources and provides an inadequate framework for developing a critical reflective understanding of the deeper determinants of technical and social change” (Cleaver, 1999: 600). The use of participatory approaches must be relevant to the context in which they are applied; otherwise they may run the risk of reinforcing some of the problems they were meant to resolve. The South African experience, like all situations, is unique and thus strategies and frameworks for participation that are not locally specific are bound to run into challenges.

After the democratic transition in South Africa in the mid-1990s, the government implemented affirmative action policies through the Employment Equity Act to address the lack of employment opportunities for the disenfranchised black, Indian, and Coloured groups. Similarly, other policies aimed at bringing the excluded in were developed and the National Water Act is no different, as it aims to explicitly include those “previously disadvantaged” by the apartheid regime’s discriminatory water policies. The Act states that the institutions of water management, such as the governing boards of catchment management agencies, must have gender representation and representation from “previously disadvantaged” communities and purports that through their participation, issues of inequality and exclusion in water management in the country will be resolved. Despite the creation of legal space to repeal the discriminatory water policies of the apartheid government and put power at the hands of the people, power dynamics that create barriers to participation still exist. Cleaver points out, “the mere setting up of formal organizations and the specification of their membership does not necessarily overcome exclusion, subordination, or vulnerability” (2001: 44). This is because power manifests itself everywhere and not only at the hands of government officials. Breaking down the power dynamics at the state level does not necessarily mean that power relations at the local level have been addressed or will be overcome. Foucault argues that,

Hegemonic or global forms of power rely in the first instances on those ‘infinitesimal’ practices, composed of their own particular techniques and tactics, which exist in those institutions on the fringes or at the micro-level of society (Foucault, 1980 in Kothari, 2001: 141).

Without addressing power dynamics at the micro-level, participatory approaches may just end up reinforcing inequality in society.

Policies based on affirmative action are what Geoff Wood describes as a form of “adverse incorporation” and what Stanley Cohen refers to as “insidious modes of inclusionary control” (Kothari, 2001). Cohen believes that those people “who have the greatest reason to challenge and confront power relations and structures are brought...into the development process in ways that disempower them to challenge the prevailing hierarchies and inequalities in society” (Kothari, 2001: 143). Through this control of inclusion, the essence of participation and empowerment to make decisions that affect one’s life is lost.

The third of Cleaver’s tenets, that considerations of power and politics on the whole should be avoided as they are seen as divisive and obstructive, is particularly relevant in the South African context. Considerations of power are extremely relevant to the discussion of water management in the country as the need to redress past inequalities already suggests there are issues of power to contend with. To suggest that by constructing a participatory place everyone will naturally cooperate is naïve. In her research on water governance in South Africa, Julia Brown (2010) discovered about the establishment of catchment management agencies that expecting “people with widely different assets, capabilities and powers to come together as equals to negotiate was optimistic.” Stakeholders are going to have competing interests and viewpoints, and their heterogeneity is key to ensuring that various views are represented in the process. To reiterate, Anisur Rahman claims that participation is a “spontaneous act” and thus organizations should expect a diversity of political views and that contention will arise.

The issue of power is also linked to the final assumption that “simply getting people to the table will naturally result in achievements in decision-making or equality.”

Here we must consider participatory governance as a discursive space and the concept of communicative rationality. Jurgen Habermas developed the concept of communicative rationality, in which he argues that “human beings are rational and naturally discursive creatures, and through discussion, agreement and consensus will result” (Brown, 2010: 3). In South Africa, Lotz-Sisitka & Burt (2006) describe how “equal access to the discursive terrain appears to be an important ‘fundamental assumption’ embedded in the participatory discourse in IWRM.” This assumption neglects that there are other dynamics at play in the discursive terrain of catchment management, which may make it impossible to achieve “equal access” even if representation is diverse. These dynamics may include differences in knowledge and understanding of the material presented or the inherent societal norms, which create barriers to access.

Douglass C. North asserts, “While the formal rules can be changed overnight, the informal norms change only gradually” (Brown, 2010: 12). Those facilitating a meeting may assume that by merely ensuring that gender representation and representation from ‘previously disadvantaged’ communities is present, achievements in redressing past inequalities will be reached. Cleaver, however, argues that “codifying the rights of the vulnerable must surely involve far more wide-reaching measures than the requirement that they sit on committees [and] individually speak at meetings” (2001: 44). Lotz-Sisitka and Burt (2006) further explain how Habermas argues that participatory democracy “should be conceived around the problem of institutionalizing democratic norms (in the case of the NWA, the Act is institutionalizing democratic norms of sustainability, equity, and efficiency, through the process of legislating participation)” (Lotz-Sisitka & Burt, 2006). In a sense Habermas tells us that institutionalization and the

creation of new deliberative public spaces will lead to the possibility of consensus. However, the political history of South Africa suggests that democracy does not always occur in legally regulated spaces. The history of protest and social movements in South Africa is strong. John Williams suggests, “Community participation in South Africa is informed by the memory of community struggle – a radical form of participation – against the racist apartheid State” (Ngwane, 2011: 385). This form of participation and that which is administered through the country’s new democratic institutions are at odds with one another.

The potential for participatory governance to enhance democracy and bring about social change should not be understated. However, as the above assumptions demonstrate, participation cannot be treated as just bringing people to the table. Participation has evolved immensely from its first iterations and as this section has noted, it has become institutionalized over time. Through this process of institutionalization, participatory approaches may have the potential of reinforcing inequalities and power dynamics. Institutional change that brings about participatory approaches does not automatically mean that power will be redistributed. Next, we look deeper at the institutionalization of participation in South Africa’s water resources management.

2.6 Institutionalization of Participation in Water Resources Management

This chapter has so far outlined the evolution of water policy in South Africa through the development of the National Water Act, the institutional framework of IWRM on which the NWA is based, and the assumptions of participatory governance in general and in relation to water management. The previous section revealed why it is necessary to approach participatory techniques in water management with a critical eye.

Participation is a key feature in both the NWA and IWRM frameworks and institutions have been developed for participatory water governance in South Africa. In this way, participation has been institutionalized through both the National Water Act and the adoption of IWRM principles (Lotz-Sisitka & Burt, 2006; Rahman, 1993). As Cleaver (2001) argues, “institutions are highly attractive to theorists, development policy-makers and practitioners as they help to render legible ‘community’, and codify the translation of individual into collective endeavour in a form that is visible, analyzable and amenable to intervention and influence”. This section examines the institutionalization of participation in water resource management and how the building of such institutions has shaped participation in different ways.

The broadening of IWRM policy in South Africa through the National Water Act meant that participation would become a major focus of any policy approach. As we know, the concept of participation is rooted within IWRM’s four main principles, which state that water development and management “should be based on a participatory approach, involving users, planners and policy-makers at all levels” (Funke, Oelofse, Hattingh, Ashton, & Turton, 2007: 1239). With the adoption of IWRM principles, South Africa also adopted a set of norms and parameters for water management. I argue that the control of participation through South Africa’s water institutions, such as catchment management agencies and forums, has reduced participation to an administrative technicality, rather than a democratic tool for social change. This weakening of participation has created immense challenges for the Department of Water Affairs in its attempt to reach its goal of redressing past inequalities and achieving equitable and sustainable water management in the country.

To recap, the National Water Act lays out the model framework for the establishment of Catchment Management Agencies (CMAs), whose primary purpose is to involve local communities in water resource management. The Act recognizes “the need for the integrated management of all aspects of water resources and, where appropriate, the delegation of management functions to a regional or catchment level so as to enable everyone to participate” (Republic of South Africa, 1998). The Governing Board of any CMA must have gender representation, demographic representation, and representation of disadvantaged persons and communities. The first step in the establishment of a CMA is the creation of catchment forums (CFs) where participation at the most local level is initiated in water management. There are also opportunities for participation within the Water User Associations (WUAs) and catchment management committees (CMCs). Rahman (1993) describes these bodies (i.e., the CMA, WUAs and CFs) as an “organized structure of institutions” in which participation is no longer seen as “a spontaneous act of people.” These institutions control participation using a set of parameters, which reduce it to a predictable approach. Furthermore, Jerome Priscoli (2004) points out that “participation is a bottom-up phenomenon” and through institutionalization, it is controlled in a top-down approach. What this dichotomy raises is the question, how can the benefits of participation be captured in an institutionalized water management system? Is there a way to have spontaneous modes of communication that still yield results in moving towards equitable and sustainable water management?

Due to vast geo-physical and socio-economic differences across the country, each water management area in South Africa must adopt its own system of management, which reflects the experiences of that region. The National Water Act, with its

underlying IWRM principles, developed the structures and platforms for participation and representation to occur in each of these water management areas in South Africa. These conditions were essential in codifying the rights to water for all South Africans and in moving from a water management system of state control to a more decentralized one. However, as Lotz-Sisitka & Burt would argue, “Making sure that a body is representative of all water users does not guarantee meaningful participation” (Lotz-Sisitka & Burt, 2006). Conditions for representation can only take us so far, as illuminated by the assumptions of participation outlined in the previous section. The following section presents a case study about the Umgeni River catchment area in South Africa, in order to examine how participation has been shaped at the local level in this case through the National Water Act and the principles of IWRM, and what challenges exist in initiating participation for equitable and sustainable water management.

3 Research and Case Study Background

3.1 Research Question and Methodology

The main question guiding my research is, “How does the way participation is institutionalized in South Africa’s water management policies shape participation in catchment management forums?” I initially asked, “Does the legislative framework for water management in South Africa foster an environment for equitable participation in catchment management forums?” However, the scope of this latter question seemed too broad for the extent of my study. To answer the main question I wanted to determine whether participation in catchment management forums involved “previously

disadvantaged” groups and whether their participation was working towards redressing past inequalities.

The main methodology used to explore my research question was a case study supported by personal observation. Secondary information was collected in Canada through two reading courses and independent review of relevant literature on participation, participatory governance, integrated water resources management, and the history of water management in South Africa. The case study was informed by secondary information that I gathered in Durban through meetings with various stakeholders of the Lower Umgeni CMF, forum minutes and other relevant materials given to me by the forum members. The case study was also supported by my own personal observations from a catchment management forum meeting. As this observation only provided a limited view into the state of participation in catchment management, other research regarding participation and catchment management institutions was consulted and used to supplement the case study.

The findings of this observation and case study and those from other research I consulted suggest there are universal challenges for initiating participation in water management across the country. The conclusions I draw related to the process of institutionalization and barriers to participation are relevant to the development in other catchments, as well. The discussion of participation in water management points to broader issues of democracy, not only in South Africa but also in other young democracies where institution building is occurring and participation may still be perceived in terms of protest and social movement.

3.2 Case Study Background

The strength of a case study approach, as defined by Choguill (1996), is its “ability to probe in depth into underlying causes of success and failure, as well as assessing the environment within which a set of decisions and actions...were taken.” However, its limitation is that “it always remains somewhat of a mystery as to whether the conclusions reached are universal or whether they are merely limited observations at a specific location in time” (Choguill, 1996). Despite these limitations, this methodology offered the best approach to observe how participation occurred at local level with regards to water management.

The selection of the case study location was determined by my participation as a research intern with a project funded through the International Development Research Centre’s (IDRC) Climate Change Adaptation in Africa Program. The three-year project, titled *Strengthening the role of civil society in water sector governance towards climate change adaptation in African cities – Durban, Maputo, Nairobi*, is administered through the Institute for Research and Innovation in Sustainability at York University. As part of this research internship, I worked with a local NGO and partner of the project in Durban, called Umphilo waManzi (“Water is Life”), and was connected to the Centre for Civil Society (CCS) at the University of KwaZulu Natal (UKZN). As an intern, I assisted the director and consultants of Umphilo waManzi in documenting outcomes from participatory action research workshops being carried out in four peri-urban communities of Durban. During the workshops, community members were led through a series of activities which had them discuss, characterize, and illustrate the impacts of climate change on water resources in their communities. They also had to identify assets in their

community that could be accessed to raise these issues with local authorities. Subsequent workshops addressed the creation of action plans for the four communities and training for community members on how to bring their issues forward to the local officials to advocate for programs and services.



Figure 3. Workshop participants in the village of Umbumbulu creating a timeline of significant water events in their community. (Source: Personal photo)

The focus of this internship was in the area of climate change adaptation and water service delivery, and the experience exposed me to some significant issues affecting water resources in the country. Through my participation in the community workshops, I was able to learn about the issues of flooding, extreme storm events, pollution and even drought that were redefining the relationship between people in these communities and their water resources. Through Umphilo waManzi and CCS, I was able to meet with academics and community activists working on water, participation, and other social issues and discuss these issues more deeply with them. Through these

connections, I also made contact with the local water resources community. I selected the Umgeni River and its catchment management forums as the focus of my case study because it was able to learn about it through these contacts, and because of its significance as the primary regional water source for the city of Durban, which has an estimated population of 3.5 million. However, the experience of water management in the Umgeni catchment is related to all the other catchments in the country where catchment management forums exist but the establishment of a catchment management agency has not yet been realized. The catchment also spans across rural, peri-urban, and urban environments and thus relates to the water management experience of many other rivers where the upstream and downstream dynamics between rural and urban environments are evident.

3.3 Overview of the Umgeni River Basin

The Umgeni River⁷ is situated in the eastern part of South Africa, and lies mostly within the province of KwaZulu Natal (KZN). The province has an estimated population of 10,819,130 people, according to 2011 mid-year estimates (Statistics South Africa, 2011). The population of the Umgeni catchment is 1,753,400 and is 64% Black, 17% Asian, 16% White, and 3% Coloured⁸. Population distribution and density is mostly < 2500 people per km², with very dense populations (between 5000 and over 20,000 people per km²) in the Durban, Pietermaritzburg and Chatsworth areas (South African River Health Program, 2002). Languages spoken are Zulu (76%) and English (24%).

⁷ In isiZulu, there are different ways to spell Umgeni. When this paper refers to the Umgeni River, the following spellings may be used: Umgeni, Mgeni, or uMgeni.

⁸ In *Coloured and Black Relations in South Africa: The Burden of Racial Hierarchy*, Kendrick Brown claims that “Coloured” refers to any person of “mixed-blood” and includes children as well as descendants from Black-White, Black-Asian, White-Asian, and Black-Coloured unions.

Average annual income per person is R15, 100 (approximately CDN\$1850) and the rate of unemployment is 27.9% (Water Research Commission, 2002).

The source of the Umgeni River is in the Lower Drakensberg or KwaZulu Natal lowlands, and it flows southeast to drain into the Indian Ocean in the central-northern area of the city of Durban. The city of Durban and its surrounding areas make up eThekweni Metropolitan Municipality, which was founded in 2000 by merging formerly independent local councils and tribal land. The Umgeni River is approximately 225 km long with a catchment area of 441 km². There are four major water supply dams on the Umgeni: the Midmar Dam, Albert Falls Dam, Nagle Dam, and Inanda Dam. The dams are maintained and operated by a state-owned entity called Umgeni Water, which supplies bulk potable water to six KwaZulu Natal municipalities. The Umgeni River also has two important tributaries: the Umsunduzi River and the Umhlangane River.



Figure 4. A map of the Umgeni River catchment area. The Umgeni River is the larger of the two rivers on the map; the smaller one beneath it is the Umlazi River. Durban is located in the bottom right hand side of the map (South African River Health Program, 2002).

South Africa is a semi-arid country and according to the Water Resources Institute it is water scarce (UNEP/GRID-Arendal, 2005). As Ken Conca defines it, “the dominant features of South African hydrogeography are a predominantly semiarid climate, an uneven distribution of water in both space and time, and a poor fit between the location of water and the location of people” (Conca, 2006: 315). However, the Umgeni River basin fares better than other catchments in the country in terms of water quantity. The basin has mean annual precipitation of 410-1450 mm, mean annual runoff of 72-680 mm, and mean annual evaporation of 1360-2040 mm, meaning it is better “watered” than the rest of the country. Even so, over 80% of rainfall in the Umgeni basin occurs between October and March. The Umgeni River flows through several different types of eco-regions, including mountains, savannah, valley bushveld, sandy lowlands and coastal mangroves. More than 12% of the Umgeni catchment is formally or informally urbanized.

In relation to the geo-physical jurisdictions of the National Water Act, the Umgeni River lies in the Mvoti-Mzimkulu water management area (WMA) (#11), which is bordered by the Mvoti river to the north and Mzimkulu river to the south. Currently, however, there is no catchment management agency established for the Mvoti-Mzimkulu water management area. Despite this, in 2000, with assistance from the Danish International Development Agency (DANIDA), the Department of Water Affairs initiated pilot IWRM projects in three water management areas of South Africa, one of which was the Mvoti to Mzimkulu area (DWA, 2012). A proposal to establish the

Mvoti-Mzimkulu Catchment Management Agency was completed in 2004, which included a situational analysis, stakeholder participation, and a financial viability study (AJ Wilson and Associates International, 2004). The proposal recognizes that this water management area is well endowed with rainfall, giving it a “considerable strategic advantage” and providing “one of the reasons that it is relatively well developed in terms of large population centres and concomitant industrial and manufacturing sectors” (AJ Wilson and Associates International, 2004). The proposal also reflects the NWA’s goals of redressing past inequities and that water resources should be managed to benefit poor people and contribute to poverty alleviation. Furthermore, the proposal recommends that upon establishment the CMA should ensure the necessary broad level of representation from previously disadvantaged communities, educate members on their role within water management and develop a ‘Water for Poverty Eradication Agenda’ to ensure that addressing poverty remains a key theme in catchment plans and strategies (AJ Wilson and Associates International, 2004).

For the purpose of this study, I wanted to look at the catchment management forum (CMF) level, where the first phase in the establishment of a catchment management agency takes place. To recall, the first phase involves the formation of catchment forums to initiate participation and build relationships between stakeholders and interest groups within the catchment. According to the Department of Water Affairs, the forums are a mechanism for consultation and interaction with stakeholders. Once it is determined that adequate representation of stakeholder interests is achieved, a proposal for the establishment of a catchment management agency can commence. Catchment management forums are public forums that are not funded like water user associations

and catchment management agencies. As part of my case study, I decided to observe and study the Lower Umgeni Catchment Management forum, one of four active catchment forums along the Umgeni River. The others cover the Upper Mgeni, Msunduzi, and Inanda regions of the river. The Lower Umgeni Catchment Forum covers the part of the Umgeni River from the estuary and mouth of the river to the Inanda dam region to the northwest. The area encompasses eThekweni municipality (City of Durban). The Department of Water Affairs divided the Umgeni catchment into six resource units,⁹ which are illustrated in *Figure 5* (South African River Health Program, 2002).



Figure 5. The Resource Units of the Umgeni River Catchment for the Department of Water Affairs (South African River Health Program, 2002).

⁹ A resource unit is a sub-catchment of the larger study area that was chosen as a unit of reporting partly because it is a sensible geographic unit for river management, but also because people can relate to sub-catchments (often associated with dams) much better than to eco-regions, which are used by ecologists and managers to make ecological assessments (South African River Health Program, 2002).

The six resource units are: Albert Falls and Nagle (yellow), Midmar (green), Upper Umsunduze (brown), Umlazi (cream), Lower Umgeni and Durban (teal), Inanda (rose), and Pietermaritzburg (light green).



Figure 6. The Lower Umgeni Catchment Management area (South African River Health Program, 2002).

The mouth of the river includes an extensive mangrove ecosystem, which runs north from the mouth of the River along the coast.



Figure 7. Umgeni Estuary and the M4 highway bridge. (Source: UEC)

The Lower Umgeni catchment forum meets quarterly and is currently facilitated by the Department of Water Affairs (DWA). From what I learned, a CMF is normally established and facilitated by the Department of Water Affairs' regional offices because it is the Department's responsibility to ensure that participation is taking place towards the establishment of a catchment management agency. However, the Duzi-Umgeni Conservation Trust (DUCT), a local environmental organization, initially established the Lower Umgeni catchment management forum. Based on personal conversations with catchment forum members, I learned that the forum began as a special interest group led by DUCT and included other conservancies that work along the Umgeni River and Msunduzi River, to raise awareness of problems of river health and advocate for solutions to these problems (e.g., pollution, invasive species, water quality, etc.). After being facilitated by DUCT for several years, members of the CMF wanted DWA to take over the responsibility for facilitating the forum, because it was already doing so with other

forums and because of its administrative capacity. DWA agreed and has facilitated the Lower Umgeni forum since 2009 (Personal conversation, 2011).

3.4 Personal Observation of the Lower Umgeni Catchment Forum

Since, the Lower Umgeni Catchment Management forum meets quarterly; I had the opportunity to attend one of the meetings during my three-month stay in Durban. By attending the meeting, I aimed to see how the members interacted with one another and I wanted to learn about the discussions and issues they were engaged in regarding the river and its resources. The meeting was held at a canoe club¹⁰ in Durban around the Blue Lagoon estuary of the Umgeni River. In attendance were representatives from the Department of Water Affairs (DWA) regional office, a representative from eThekweni Water and Sanitation (municipal government)¹¹, the Umgeni Estuary Conservancy (UEC)¹², the Duzi-Umgeni Conservation Trust (DUCT)¹³, the Riverhorse Valley Business Estate Management Association (RHVBEMA)¹⁴, and other interested individuals. At this particular meeting, there were 13 participants, of whom five were women; eight were men; and eight were black or Coloured. Of those present, four represented government, five represented civil society, one represented the private

¹⁰ There are hundreds of recreational and competitive canoeing clubs across South Africa. Like many other recreational clubs, black or Coloured South Africans would have been banned from many of these venues during apartheid.

¹¹ There is a Coastal Engineering, Stormwater, and Catchment Management Department within eThekweni Municipality as well; however they were not represented at the meeting I attended.

¹² The Umgeni Estuary Conservancy is a group of individuals who aim to generate interest and active participation to conserve and restore the Umgeni River and its riparian zones around the estuarine area of the river.

¹³ The Duzi Umgeni Conservation Trust raises awareness of problems with the health of the uMsunduzi and uMngeni Rivers and engages in river health projects, education, and advocacy.

¹⁴ The Riverhorse Valley Business Estate Management Association provides management and services, (i.e., security, environmental management, etc.) to industrial and manufacturing property owners within an industrial complex on the Umhlangane River. The Association aims to provide essential services and activities to property owners and neighbouring communities.

sectors, and two represented academia. The following table shows a percentage of some of the groups represented at the forum meeting.

Women	Men	Black or Coloured	Government Representation
38%	62%	62%	31%

Figure 8. Representation of Lower Umgeni CMF participants

The forum followed a conventional meeting style with a chair, an agenda, and a secretary recording the minutes. Each member had the opportunity to speak to the forum and raise issues of concern and share information. There was also an opportunity to update the forum on current issues or projects. For example, the municipality spoke to the development of a Green Corridor along the coast of the Indian Ocean and up the banks of the Umgeni River, in order to improve environmental and recreational connectivity along the waterfront. Some of the major issues raised were: industrial pollution, solid and fecal waste dumping, illegal sand mining activity occurring upstream¹⁵, invasive species, and the loss of native riparian vegetation.

At the end of the meeting, the chair of the meeting, an employee from eThekweni Municipality, asked the forum members to provide names of organizations or individuals that should participate in the forum but that currently do not. I assumed this exercise was intended to increase membership and the diversity of stakeholders that participate in the forum. For example, most members highlighted the absence of the Ministry of Natural Resources, whose participation would be essential to addressing the issue of illegal sand

¹⁵ Sand mining, or sand winning, is the practice of extracting sand mainly for the manufacturing of concrete. The Department of Mineral Resources regulates sand extraction permits but there are illegal operations along the Umgeni River motivated by increased development and high demand for the material. Unsustainable sand mining activity can lead to destruction of riparian zones, destruction of spawning habitats, and increased suspended solids in the water (i.e., increased turbidity)

mining. At this particular meeting, those defined as “previously disadvantaged” were not necessarily highlighted as missing from the forum. I observed that the stakeholders that were present, albeit extremely dedicated to the health of the river, represented mainly three cross-sections of stakeholders (i.e., environmental NGOs, the private sector, and government). The agenda and discussion focused mainly on issues of river health (i.e., invasive species, pollution, destruction of riparian vegetation, etc.). Discussions of issues connected to equity issues, such as illegal sand mining and fecal pollution, focused mainly around environmental concerns rather than social concerns, such as sanitation services, water use conflicts, and poverty. This aspect of the issues was not discussed at the meeting I attended.

My observation of the Lower Umgeni Catchment Management forum was limited; however the opportunity did highlight a few things for me. The majority of the forum members represented mainly the environmental concerns of the river. This created a lack of discussion around the social aspects of the problems along the river. As a result, only half of the National Water Act’s goals of equitable and sustainable water use were being addressed in the forum. I also did not see how the forum was initiating participation of disadvantaged communities that would be necessary in redressing past inequalities with regard to access to water resources. I was surprised by lack of contention amongst the group. I had envisioned a rowdy public forum with individuals and groups debating issues. I know that may have been naïve on my part and I gained a lot of understanding of how this particular catchment management forum actually works. By attending the forum, I was able to see the process in action and develop connections with some of the forum members for the interviews.

3.5 Informal Interviews

As part of my initial research plan, I intended to document the perceptions of participants within the catchment forums, including those of DWA and municipal officials, members of industry and farming associations, and members of conservancies and community organizations, through the use of semi-structured interviews. Through these interviews, I had hoped to determine how participation was influencing catchment management along the Umgeni, what challenges exist to establishing a catchment management agency for the area (to recall the Umgeni River lies within the Mvoti-Mzimkulu water management area), and gain insights into the future of water resources management for the Umgeni River. The interviews were supposed to provide context for the case study and would be used to define how participation is understood at the local level in terms of the National Water Act and its aim to redress past inequalities. However, as I began to learn more about catchment management forums and the National Water Act while I was in Durban, I realized that my initial sample and research questions were not going to allow me to address the issues of participation and equity that I intended to in my research. For one, I had not highlighted “previously disadvantaged” communities in my sample nor were they even represented at the Lower Umgeni catchment management forum. Despite participation of black and Coloured South Africans being 62% of the forum members, all either represented government or academia. Although they may have been considered members of “previously disadvantaged” communities, they were not poor urban dwellers. The groups I had highlighted and who were available to interview would only provide me with insight into one side of the issues. Furthermore, the scope of my questions was too broad for the

catchment forum level. The forum members were intensely involved at the local level and would be unable to provide insight on the status of a catchment management agency for the Mvoti-Mzimkulu area, apart from the Department of Water Affairs' regional office.

The members of the forum could, however, offer me insight into some of the issues on the Umgeni and the history of water management in the area. Instead of conducting the interviews, I decided to have several informal discussions with some of the members to learn more about their involvement in the forum and about the key issues affecting the Umgeni River and its tributaries. These conversations offered essential information regarding the state of the Umgeni River and context for the case study.

Some of the issues discussed included:

- **Invasive Species:** The main alien species on the river, which are cause for concern, are Water Hyacinth and the Balloon Vine. Water hyacinth can cause obstruction of navigation and fishing and blockage of irrigation and drainage systems. These issues can lead to economic losses for fisheries, agriculture, and shipping.
- **Dumping:** Industrial waste is becoming an issue along the river. One member noted an example of an industrial laundry service that was dumping its wastewater into the river.
- **Fecal pollution:** Stakeholders on the Umhlangane River (a tributary of the Umgeni River) noted that there was fecal pollution entering the river from nearby informal settlements. One settlement highlighted has been designated by the city to be destroyed and therefore the provision of sanitation services to the area is not

a priority. The lack of sanitation services and increasing water tariffs for household water use has made open defecation an issue, especially in urbanized areas.

- **Sand Mining:** Small construction and brick-making companies are extracting sand from the Umgeni riverbed without permits from the Ministry of Natural Resources. The removal of large quantities of sand can lead to erosion and impact wildlife habitats. Altering the structure of the riverbed can also affect the floodplain area.



Figure 9. Erosion from sand mining activities along the Umgeni. (Source: DUCT)

I would have like to have had more time to take what I learned from my observations and primary research and rephrase my research questions so I could have conducted more formal interviews. I believe a more formal interview process would have provided useful information but only if the questions supported the research problem. After several weeks in Durban, I no longer felt the proposed questions would have done so. However,

the informal conversations I had with members of the forum were instructive and did offer the context I needed for the case study.

4 Findings

The following section presents the findings of my study of participation in the Lower Umgeni Catchment Forum, complemented by some other examples from around the country. The first section characterizes participation in the Lower Umgeni Catchment Forum and identifies some of the barriers to participation from “previously disadvantaged” communities in water management. The second section examines some other examples of participation in catchment forums and catchment agencies in the country to supplement my personal observations from the Lower Umgeni. The final section identifies some ways forward for reimagining participation and democracy in water resources management in South Africa.

4.1 Characterizing Participation in the Lower Umgeni Catchment Management Forum

4.1.1 Evaluating Participation in the Lower Umgeni Catchment Forum

Referring to the goals of participation outlined in the National Water Act and the objectives of Integrated Water Resources Management, this section characterizes participation in the Lower Umgeni Management Forum. To recall from the NWA, participation in South Africa’s water management institutions is intended to redress past inequalities from discriminatory water policies. Through gender representation and representation from previously disadvantaged communities, participation is intended to make water management decisions more equitable and sustainable.

The meetings I attended with catchment forum stakeholders provided a good overview of the state of the health of the Lower Umgeni River and insight into the relationship that exists between the forum stakeholders. To recall, membership in the forum is largely made up of environmental groups and government officials, with participation from a business management association and some other interested individuals. To say that meaningful participation was not occurring in the forum would be false. The groups and individuals I met were taking the lead on addressing some of the major water quality and quantity issues affecting the river. Some were acting as watchdogs against illegal activity and advocating for protection from environmental degradation, while others were pushing restoration programming and trying to secure funding from the municipality and other outside donors for this work. All the stakeholders of the forum that I spoke to reiterated that their main reason for participating in the forum was to connect with other groups interested in the river and to share information on their projects and initiatives. I observed an immense amount of dedication and teamwork from these stakeholders. One of the main responsibilities of DWA is to protect the health of the country's water resources in both quantity and quality. I could see this objective in action through the participation and activities of the stakeholders present at the forum. The forum had successfully built a network of advocates for the river who were collaborating together, fostering awareness, and sharing resources. I could see any of these member organizations playing a role in the development of a catchment management agency for the area.

However, another responsibility of DWA is to ensure the effective participation of all stakeholders in water resource decisions and work to redress past inequalities in

relation to access to water through representation of disadvantaged persons and communities. This aspect of DWA's responsibilities was less evident at the forum. The forum is intended to initiate participation in the development of a catchment management agency, the embodiment of the National Water Act that aims to redress past inequalities among other objectives. However, those individuals or communities that were "previously disadvantaged" were not yet represented in this forum. This observation is solely based on the information I obtained from attending one meeting and indirectly from the forum's minutes. To characterize participation in the forum, I would argue that objectives for environmental protection were being represented strongly and that the environmental advocates emerged as key leaders on the forum. The participation of "previously disadvantaged" groups was less evident.

Although the issues along the river are complicated, there were several issues where the involvement of "previously disadvantaged" communities could be instrumental in seeking a resolution. For example, the issue of fecal contamination in the Umhlangane tributary from nearby informal settlements could be addressed with the participation of a local leader or community-based organization from the informal settlement. Their voices along with the other members of the forum could make a strong case to the municipality to seek some resolution to the provision of sanitation services in that area. Furthermore, addressing the issue of illegal sand mining, a seriously destructive concern for the river, necessitates a conversation with local leaders, authorities and community members who may in fact be involved, either directly or indirectly, in this activity. The issue of illegal sand mining does raise larger issues of access to water resources, unemployment and poverty in the country. Presumably the individuals conducting this illegal activity are not

doing so to damage the riverbed and local water resources, but rather to earn an income for their families. This type of issue moves the discussion of water resources management beyond water quality and water use, to one situated in a larger context of economics, political power, and community development.

Forum members are involved in numerous activities to engage communities along the river. The Durban Green Corridor¹⁶ program, an initiative of eThekweni Municipality and the Duzi-Umgeni Conservation Trust, focuses on local job creation, social empowerment, promoting eco-tourism, nature protection and conservation in the Umgeni River Valley and estuary, and environmental education for local residents and schools. Youth Programmes under the initiative offer bike mechanic skills training so youth can become bike tour guides for the cycling trails along the banks of the river. The Umgeni River Estuary Green Hub, a centre for environmental education operated also under the Green Corridor initiative, employs people from the neighbourhood to run the bike rental program and provide tours. The opportunities to engage the community in connecting to the river appear to be numerous. From the stories I heard about bike guides and other opportunities for employment along the river, there appears to be an understanding that fostering an individual's participation in water management can come about through economic opportunity. In May 2012, DUCT organized a river walk from source to sea to raise awareness of the health of South Africa's rivers and familiarize DUCT with the entire river. In her blog journaling the experience, Penny Rees, the coordinator of the walk, highlights the connection between economic opportunity and environmental stewardship. She meets a young man on the beach by the estuary who works for

¹⁶ The Durban Green Corridor initiative began in 2010 and is supported by the Department of Water Affairs, local businesses, and sports and environmental associations.

eThekwini Municipality as a beach cleaner. He tells her “For us, doing this work, it has become something that we like, something that we enjoy” (Rees, 2012). The worker said that the job did not pay very well but that he does not mind because he enjoys taking care of the environment. The voices of these workers and other groups could be new voices for equitable and sustainable water management within the forum.

The lack of representation from “previously disadvantaged” communities could point to a number of factors that were beyond the scope of my observation. For one, I am not as aware of the community leadership that exists in the neighbourhoods along the river or of the dynamics that may already exist between these communities and the forum. However, in trying to seek answers, I learned of various barriers that might inhibit an individual or community’s participation in water management institutions.

4.1.2 Potential Barriers to Participation from Previously Disadvantaged Communities

This section explores, in general, some of the barriers to participation for “previously disadvantaged” communities in catchment management forums. To recap, the term “previously disadvantaged” is defined by DWA and refers to those persons and communities, which have in the past been prejudiced by racial and gender discrimination in relation to access to water. The barriers presented below are not discussed in relation to the Lower Umgeni Catchment forum, but rather in a broader context of what I came to learn about how catchment forums in general operate.

The forums are open to the public so the lack of representation from “previously disadvantaged” communities does not necessarily represent a lack of invitation, although I was unable to determine how the forum meetings are advertised or whether it is solely

through a contact list maintained by the DWA regional office. The lack of representation may be the result of several other factors or barriers, such as timing and location of the forum meetings, the meeting style used, and the technical nature of content delivered. First, the timing and location of the meeting may inhibit participation from “previously disadvantaged” communities. The location of meetings may not be easily accessible by public transportation or in a location where individuals feel at ease to voice their concerns. In her own research on participation in water governance in South Africa, Julia Brown observes that “Voice is relational: in ‘created’ spaces in their own locality, black speakers may feel comfortable voicing opinions – less so in multi-racial ‘invited’ spaces” (Brown, 2010: 12). Luke Sinwell defines invited spaces as “formal channels of participatory democracy afforded to the masses by state authority” (Ngwane, 2011: 385). Based on this definition, the forum venue represents one of these “invited” spaces. Sinwell suggests that “invented” spaces, where people create for themselves, through community and self-organization, direct action for exerting pressure and effecting desired change, are more likely to initiate progressive change than “invited” spaces (Ngwane, 2011: 385).

The timing of forum meetings may also present a barrier. If a forum meeting is held during business hours the stakeholders that are paid to be there or have work schedules flexible enough to allow them to attend, have an advantage over stakeholders that participate on a voluntary basis and work full-time. Representatives from government are paid to be present and their attendance at the forums is part of their work duties. As Patricia Perkins describes it, “Public participation depends on people who have the time and energy to participate, so it is almost inevitably class-biased and favours dominant

cultures or ethnicities” (Perkins, 2008). Inevitably there will always be an opportunity cost to the participation of individuals from disenfranchised communities (i.e. time spent at the forum may be better spent earning incomes for their families).

Moreover, from my observation, forum meetings are facilitated using a conventional meeting style that includes an agenda with set discussion points, a designated chair and recorded minutes. Through the literature review, we know that participation can be controlled through institutional arrangements and formalized methods of interaction, for example conventional meeting styles and rules (e.g., *Robert’s Rules of Order*¹⁷). Judith E. Innes and David E. Booher (2004) argue that such meeting styles limit discussion to a series of motions and formal debate rather than more free flowing dialogue. Stakeholders from “previously disadvantaged” communities may not seek to participate in such formal spaces because they may see the format as ineffective or culturally off-putting. By formalizing participation through particular rules and conventions, other forms of organization and learning might also be neglected. The use of Robert’s Rules can, as Susskind points out, force “votes, divisions and partisanship instead of the seeking of common ground and building social capital” (Innes & Booher, 2004). Through the use of consensus and other participatory techniques, members might have the potential to learn from one another and build reciprocity.

Who sets the agenda and facilitates the meeting may also deter communities from attending or participating in the meetings. A person in authority who chairs the meeting, such as a government official, can create a power dynamic where some members may not feel comfortable voicing their concerns. The assumption here is that power differentials

¹⁷ Robert’s Rules of Order was first published in February 1876 as a guide for parliamentary deliberation. The rules have since been adopted and used as a guide by multiple organizations in the creation of their by-laws and constitutions.

can be controlled through a formal institution. Habermas would argue that “human behaviour can be regulated and power differentials contained by the creation of new spaces for negotiation and by formalizing rules in a written constitution” (Brown, 2010: 12). However, returning to the literature review and assumptions of participation, we know that the use of a formalized process does not guarantee that power will automatically be redistributed within a group or organization. The process may actually reinforce these power dynamics.

Finally, the content of information delivered at forum meetings may also be a barrier to the participation of “previously disadvantaged” communities. Lotz-Sisitka and Burt point out of the South African example that as a result of a “lack of education or limited education many people do not have the basic skills and information needed in order to participate in water resource management” (2006: 26). Water resources management is an interdisciplinary sector that involves technical information. The information presented by DWA or other members may be too technical in nature and community members may not feel that they are able to participate if they do not understand this information. Is there space at catchment forums to invite other forms of knowledge? Lotz-Sisitka and Burt also suggest that differences in knowledge in “previously disadvantaged” communities applies to political education too, as “for most people in South Africa, no matter what their status, democracy is a new system and South Africans are still developing their understanding of this system” (Lotz-Sisitka & Burt, 2006). Developing literacy of the country’s water policies both for water management and water services is important for developing engagement in these issues.

All these barriers point to issues of power. From the literature review on participatory governance, we saw how power could manifest itself even in a process that is deemed to be participatory, democratic and aimed at breaking down barriers between groups. In my observations of the Lower Umgeni Catchment Forum, I discovered that the forum's focus was mainly on issues of sustainability but that issues of equity were not addressed as evidently. This would suggest that inherent differences in power may be at play that are creating barriers to the participation of "previously disadvantaged" communities or directing the agenda and conversation at the forum away from issues of equity in water use and management.

4.2 Participation in other catchment forums in South Africa

The lack of representation from "previously disadvantaged" communities is not unique to the Lower Umgeni Catchment Management Forum. Julia Brown observed a similar trend in her research of catchment management in the Inkomati basin. She discovered the "most active stakeholders (discounting paid officials) to be a combination of the educated, professional, articulate, affluent and the retired" and indicated that their "input may skew proceedings" (Brown, 2010: 3). In eThekweni Municipality, I learned about an active catchment forum in the southern part of the city along the Umlazi River. This catchment forum is comprised mainly of industrial stakeholders in the Isipingo industrial complex, including major companies, such as Toyota, Sapref (a major oil refinery in South Africa), and Mondi (a paper and packaging company).

On the other hand, there are some examples of participation from "previously disadvantaged" communities in catchment management forums. Upstream from Durban in the Msunduzi tributary there is participation from "previously disadvantaged"

communities in the Msunduzi Catchment Management Forum. In his research on participation from these communities, Maxwell Boakye points out several shortcomings in their participation despite having been represented and being “at the table.” Through the use of semi-structure interviews and a questionnaire with participants who represented the concerns of disadvantaged groups, Boakye’s research found that “the disadvantaged community participants [did] not see their involvement in the [forum] to be meaningful” (Boakye, 2007). The main challenges they experienced were differences in educational background and “lack of understanding of the information presented”, which was affecting networking and trust-building among forum participants (Boakye, 2007). As we see, “one cannot...assume that participation will take place by simply calling a meeting or organising a group of people under the umbrella of a Catchment Forum” (Lotz-Sisitka & Burt, 2006). Boakye uses a typology of participation to determine the quality of participation from “previously disadvantaged” communities. The typology is Sherry Arnstein’s Ladder of Civic Participation, which categorizes levels of participation through the extent of the citizens’ power. Figure 4 illustrates Arnstein’s Ladder, which includes eight rungs that ascend according to the extent of the citizens’ power. The highest level of power is citizen control, in which the people have control to make all decisions.

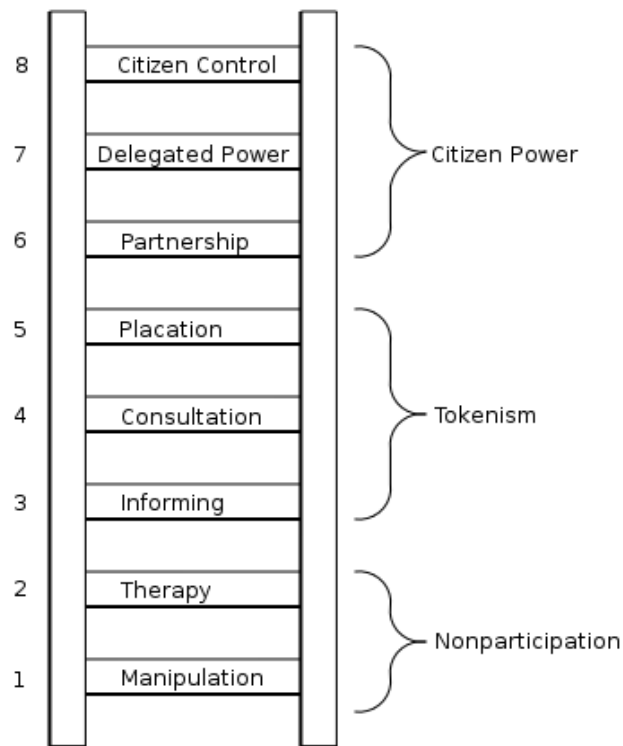


Figure 10. Arnstein's Ladder of Civic Participation (Arnstein, 1969)

From his research, Boakye compared the level of participation of disadvantaged communities in the Msunduzi forum to somewhere within the range of tokenism on Arnstein's ladder. In this range, he determined that the knowledge and presence of these groups was taken for granted (Boakye, 2007). Furthermore, Ken Conca points out that "one senior DWAF official who played an important role in drafting the National Water Resource Strategy suggested that "consultation" was a better term to describe current DWAF practice" (Conca, 2006: 349). If we look at the ladder, this supports Boakye's argument that the process can be likened to tokenism. Boakye's research illustrates something critical in the catchment forum process, which is that even if the "previously disadvantaged" are represented at the table, this does not ensure that their participation will be meaningful or have any intended effect.

Arnstein's Ladder and Boakye's research offer insight into how effective participation has been in catchment management forums in the country. However, this typology does have its limitations with regard to water resources management. I realized, through the course of my research, that there are inherent limits to the power and control that citizens can have in water management decision-making. For one, water resource management is technocratic and involves different levels of expertise. Complete community control of water resources management decisions would put an immense amount of responsibility in the hands of the community to make technically and environmentally responsible decisions. Furthermore, catchment management forums are not made up of elected officials. They do not have the democratic authority for decision-making that a city council or catchment management agency¹⁸ would. As Cleaver points out, as well, "even where a community appears well motivated, dynamic and well organized, several limitations are presented by an inadequacy of materials resources" (2001: 46). The role of catchment management forums is to act in an advisory role, so it is impossible in this case for the participants to have complete control of the decision-making in a process that is inherently consultative. Despite this, the current situation in the Msunduzi catchment forum, and elsewhere in the country, suggests that there is still room to move up the ladder.

In addition to Boakye's research, I consulted a case study of the Lower Komati sub-basin in South Africa, which discusses the establishment of institutions for water management accompanied by a lack of action towards redressing past inequalities. The

¹⁸ The Department of Water Affairs can delegate its powers to catchment management agencies (CMA) to make decisions in regard to general management of the water resources, water use, and allocation. Members of the governing board of a CMA can be elected or nominated by the different water user groups for appointment by the minister, but not by the general public.

research was conducted by Pieter Waalewijn and Philippus Wester of the International Water Resources Association, along with Kees van Straaten of Wageningen University in the Netherlands. The Inkomati River basin, one of two catchments in the country with an established catchment management agency, extends west to east from the Transvaal Plateau to the Lowveld to the coastal plain in Mozambique; the Inkomati River drains into the Indian Ocean, just north of Maputo, Mozambique. The research points to several factors affecting the lack of action to redress past inequalities. The following is a summary of their conclusions:

- “The structure of the CMA and the establishment process are inappropriate for reflexive thinking (learning-by-doing)” – which I interpret as a lack of adaptive management where when something is deemed as not working, the process is adapted and another approach is taken to seek a different result;
- The current process to establish CMAs is “leaning towards product and form instead of process and function and is leading to the continuation of command-and-control administration;”
- Too much focus on “productive capacity such as commercial farming instead of redressing past inequities;”
- “If the focus of CMAs is about management only, and not about how to redistribute land and water rights to redress past inequities, the CMA establishment will remain a depoliticizing exercise in reshuffling administrative responsibilities” (Waalewijn, Wester, & van Straaten, 2005).

The final conclusion is significant. If the catchment management agency is to develop a strategy for its water management area an approach that focuses exclusively on

management will fail to address key issues of water use, allocation, and redressing past inequities. The concerns of small-scale stakeholders, such as subsistence farmers and community groups need to be integrated in the process along with the interests of productivity and efficiency of larger stakeholders. In the Lower Umgeni Catchment forum, there were few productive interests (i.e., manufacturing, industry, etc.) represented. However, I was aware of other forums that were made up solely of industrial stakeholders (i.e., Isipingo Catchment Forum). In the establishment of a Catchment Management Agency for the region all catchment management forums will be consulted to identify key stakeholders for the CMAs governing board. A discussion that goes beyond management concerns is required to ensure the CMA will address redistribution and past inequities.

My observations of the Lower Umgeni Catchment Management Forum, along with Maxwell Boakye and Waalewijn et al.'s research, allowed me to determine that participation in water resources management in South Africa is not redressing the past inequalities, which the National Water Act set out to do. To revisit, the country developed a progressive foundation for participation in water management to occur through the legal framework of the National Water Act and the institutional framework therein. However, the way in which participation actually occurs on the ground does not reflect what is laid out in the legislation. Flaws with regard to participation and South Africa's water management are connected to the several assumptions that many practitioners make when applying participatory methods. For example, it was assumed that the creation of new democratic institutions such as catchment management forums would result in equitable decision-making and a redistribution of power relations between

“previously disadvantaged” communities and the rest of the country. Or that by merely getting “previously disadvantaged” groups to the table would grant these groups equal access to the discursive terrain. The institutionalization of participation through the catchment management process in South Africa has prevented participation from actually working to redress past inequities. The function of catchment management forums and structure of catchment management agencies has diminished participation to a condition of representation rather than an act of empowerment or democratic agency. John Williams, after studying a participation process in the Western Cape of South Africa, describes,

Most community participation exercises in post-apartheid South Africa are largely spectator politics, where ordinary people have mostly become endorsees of pre-designed planning programmes, [and] are often the objects of administrative manipulation (Ngwane, 2011: 384).

This phenomenon will lead to a lack of trust in participatory processes because if people believe they are taken for granted they will choose not to participate. In order to restore trust in these processes and move water management from its current consultative state to one that is truly participatory, a reimagining of participation, as part of the democratic process, is needed.

4.3 Towards Sustainable and Equitable Water Management

So how does South Africa move forward? How does South Africa harness the potential of participation from “previously disadvantaged” communities in water management to actually bring about results in redressing past inequities? Some may point to education and capacity building. This applies not only to the Department of Water Affairs and their regional offices, which facilitate the establishment of the

country's water institutions, but also the water users and stakeholders intended to participate in these institutions. Funke et al. state that

Stakeholders vary widely in their ability to understand and adopt governance processes or instruments that they are not familiar with and therefore an ideal governance system needs to ensure that the participation of stakeholders at all levels is carefully balanced and integrated (Funke, Oelofse, Hattingh, Ashton, & Turton, 2007).

This can begin with education in “previously disadvantaged” communities and support for programming, which connects these communities with their water resources.

Furthermore, promoting an understanding of the need to redress past inequities in water management decisions amongst all stakeholders and DWA officials might broaden the agenda of forums past solely management and environmental issues. Education should be accompanied by initiatives to promote political literacy so stakeholders understand their role within the framework for water management and the responsibilities of its institutions. Training to improve the deliberation and negotiation capacity of small-scale stakeholders in catchment management forums is also important.

Others recognize that a change in discourse is also required. Lotz-Sisitka and Burt suggest that South Africans need to “re-conceptualize radical democracy in the context of the emergence of the constitutional state and its institutions (such as CMAs)” (2006: 20). Radical democracy is a concept, which seeks to expand the liberal definition of democracy and build consensus around difference and dissent to challenge oppressive power relations. In South Africa's water management institutions, we have learned that current participatory approaches may reinforce oppressive power relations. Our understanding of participation within water management must be understood in terms of democracy because it is deeply connected to the democratic transition that the country

has undergone since the mid-1990s. An Institute for Democracy in Africa (IDASA) document argued that

When democracy is conceived too narrowly, as simply the work of government, citizens become marginalized and democracy seems to revolve around politicians (or state officials). When citizens are placed at the centre, everything looks different (Lotz-Sisitka & Burt, 2006: 131).

Broadening our concepts of democracy in regard to water resources management could open up the process to new ways of deliberation and decision-making.

As the case study of the Umgeni points out there are several socio-economic issues related to water management that require discussions beyond water quantity and water quality. In other words, we need to rethink water management beyond solely “management” and bring other discussions of redistribution and community development to the fore. The National Water Act and framework for IWRM in South Africa do recognize these issues and take a pro-poor stance in their policies. However, they do not provide strategic direction for catchment management agencies and catchment management forums on how to discuss these issues. Patricia Perkins points out “for women and for the poor in particular, for example, water access is closely linked to quality of life, yet water committees do not reserve seats based on such subsistence concerns” (Perkins, 2008). In South Africa, the institutions for water management have ensured legal space for these concerns. However in practice, the agenda of catchment management forums is still centered on “management” concerns.

The current situation can be described as a vicious circle where “previously disadvantaged” communities are not participating in a meaningful way in catchment management forums because the forums do not address the concerns, which are important to them; and the forums are not addressing these concerns because the groups

representing these issues are not present at the forums. The groups we identify as “previously disadvantaged” are also not powerless and are organized outside the democratic institutions of the state. Rahnema argues that those we perceive as powerless have a power, which is “constituted by the thousands of centres and informal networks of resistance which ordinary people put up” (Mohan, 2001). In South Africa, these networks are strong from the anti-apartheid protests in the 1980s and 1990s and the service delivery protests of the last decade. As we recall from John Williams, participation in South Africa is informed by the memory of struggle. He concludes that this must be harnessed because: “It is precisely this repertoire of radical strategies that can and should be revisited and adapted, to advance the interests of the materially marginalized communities at the local level” (Ngwane, 2011). Applying these strategies to South Africa’s water resources management framework in order to redress past inequalities is possible.

5 Conclusion

Throughout this case study, the many challenges to implementing participatory approaches in water resources management in South Africa became evident. The National Water Act repealed the discriminatory water policies of the apartheid era and laid a strong foundation to redress past inequalities through public participation. Participation is meant to ensure that the people are involved in the decisions that affect their lives. Participatory approaches are meant to bring forward concerns, highlight differences, and seek collaborative solutions. The National Water Act created an institutional framework for water management decisions through which public participation would occur. Through the administration of participation, the process

became more about representation and ensuring those previously disadvantaged by the country's water policies were invited rather than a process of highlighting difference and social problems. Public participation requires more than just inviting people to the table and ensuring seats are available for "previously disadvantaged" groups. These steps do not guarantee that redistribution and equitable decision-making will occur.

Despite these challenges, the importance of participatory approaches cannot be underestimated. As Jerome Priscoli (2004) argues,

At its best, participation can connect us and perhaps break down stereotypes. It can help us walk in others' shoes. It can be a symbolic act of reconciliation and a vehicle for forgiveness and healing that are prerequisites for management of ethnic and distributive conflicts.

Breaking down of stereotypes, connecting people, and reconciliation are essential in post-apartheid South Africa and need to be integrated into water management discussions.

The case study of the Lower Umgeni Catchment Forum illuminated that strong leadership in water management is emerging towards the establishment of a catchment management agency for the region (Mvoti-Mzimkulu water management area). Environmental groups and conservancies are working endlessly towards the protection and restoration of the Umgeni River and its tributaries. They are also using innovative ways to engage the community in their water resources through education, recreation, and job creation.

Although the participation of "previously disadvantaged" groups is evidenced in these programs, their presence and influence on catchment management forums is less evident. Where their presence is evident, they often do not feel they are able to have any influence or they feel removed from the discussions because of educational background and other factors. Their presence and influence is intended to bring forward the social concerns of water management towards redressing past inequalities. Many of these issues are

connected to environmental concerns such as water quality, pollution, and water flow. An integrated approach requires addressing both social and environmental issues together.

The shortcomings of participation in catchment management forums point to broader issues of participation and democracy in South Africa. In the past, participation by “previously disadvantaged” groups has been mainly understood in terms of protest and social movements. However, the country has been in the process of building up its administrative and legal institutions since the democratic transition in the 1990s and integrating participation within these institutions. In order for these institutions to connect with the people in a meaningful way, a balance must be struck between the bottom-up phenomenon of participation and the top-down approach to democratic institution building.

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6.1 Appendix 1 – Summary of Meetings with Lower Umgeni Catchment Forum member organizations

6.1.1 River Horse Valley Business Estate Management Association (RHVBEMA)

RHVBEMA is a privately funded, not-for-profit, Section 21 organization¹⁹, which represents the interests of property owner in River Horse Valley, an industrial park in the northwest area of Durban. The industrial park is situated on the Umhlangane River, a tributary of the Umgeni. Property owners in this area include businesses involved in printing, clothing, assembly and distribution activities. The Association began in 2003 as a joint partnership between eThekweni Municipality and Tongaat Hulett, a major South African agro-business that produces sugars and starch. The land was converted from brickworks and sugar fields to an industrial area. The Umhlangane River, a tributary of the Umgeni, runs through the valley. The main reason that RHVBEMA participates in the Lower Umgeni Catchment Management Forum is to communicate with its other members in the hopes that a contiguous relationship can be built between organizations along the Umgeni and its tributaries. The forum is a way for the Association and the Municipality to communicate and allows the association to express the interests of its members with regard to water issues. The association has committed to several environmental projects including the removal of invasive species and planting indigenous vegetation. They've installed trash booms upstream from the valley to control the amount of waste that enters the Umgeni River. They conduct water quality testing once a month to supplement the municipality's monthly testing. According to the association these tests indicate that the major source of pollution is not point source pollution from

¹⁹ Section 21 of the South Africa Companies Act (No. 71 of 2008) defines companies as either non-profit or profit. The Act contains fundamental principles applicable to non-profit companies.

industrial activity but rather from sanitation run-off from pit latrines and open defecation in nearby informal settlements. The Association also wants to promote connectivity in the valley with the rest of the river catchment, through landscape and recreational connectivity (i.e. bike paths). The Association is keen to work with the local community in providing jobs and working with local schools to provide a clean environment for recreation and also outdoor learning. The Association believes that working with the city is more productive than fostering an adversarial relationship. The Association asserts that it provides the city with necessary services, such as pollution monitoring and water quality testing. Missing from the CMF, according to the association, are industry representatives in the Springfield area (another industrial park downstream), local government, and the rail authority, because train tracks run through the industrial park on the banks of the Umhlangane River.

6.1.2 Umgeni Estuary Conservancy (UEC)

The representatives of the UEC identified sand mining by the Ministry of Natural Resources as a significant issue on the Umgeni. DUCT has submitted access to information requests from the Ministry to identify which companies have permits for sand mining. They also spoke to the issues of reduced water flow in the estuary due to the major dams located upstream, mainly Inanda dam. In 1987, there was major flooding in the estuary but since then the dam has controlled flooding to the point now that little to no flooding of the estuary occurs. This has resulted in the mangroves growing upstream and an increase in the prevalence of invasive species. These species, such as water hyacinth and balloon vine, used to be washed downstream during flood periods to the brackish water of the mouth where they would die in salt water. The Umgeni Estuary

Conservancy also monitors issues on the shores of the river, including waste clean-up, removing invasive species, protecting and planting native species and improving public space around the river so residents become aware of the river and its features. Like the RHVBEMA, the Conservancy is also keen to improve recreation on the river, and connectivity along the banks of the Umgeni, and create outdoor classroom opportunities for local students and groups.

6.1.3 Department of Water Affairs KwaZulu Natal Regional Office (Durban)

I met two of three Senior Development Experts for Catchment Management and Institutional Development at the DWEA Regional Office for KwaZulu Natal in Durban. The staff facilitates the Lower Umgeni Catchment Management Forum, among other forums in the Durban area. They spoke about the Department's commitment to Integrated Water Resources Management (IWRM), an international concept for water resource management. DWA piloted IWRM approaches in the catchment areas of South Africa in 2000, in partnership with and with funding from the Danish International Development Agency (DANIDA). The Umgeni River lies within one of the areas chosen for the pilot. The project was implemented in two phases, the first of which was to develop guidelines related to groundwater, water conservation and demand management, and to provide support to water management institutions. The second phase of the project involved building a partnership between DWEA, the Department of Provincial and Local Government, and the Local Government Association. The aim of the second phase is to further support the establishment of water management institutions, described under the National Water Act, paying particular attention to capacity building of marginalized groups and local authorities (Introduction to IWRM).

They also discussed the current realignment process within the Department to reduce the number of water management area from the proposed 19 to nine to address the administrative burden. South Africa has nine provinces so the new water management areas would probably reflect the provincial boundaries. However many catchments cross provincial boundaries so I was unsure how this would play out. I was also introduced to the Batho Pele principles, which are the South African government's commitment to people-centered governance. Some of these principles include consultation, service standards, access, information, transparency, strategic direction, and value for money. These principles are enshrined in the mindset of the Department, which is to bring water resource management to the people.

6.1.4 Duzi-Umgeni Conservation Trust (DUCT)

DUCT is around 6 years old and is funded by levees from canoe clubs along the river. The main issues that DUCT addresses on the river are environmental flows, invasive species and sand mining. The environmental flows are important in the maintenance of wetlands, riparian habitats and water quality. Extensive damming on the Umgeni River is causing reduced environmental flows downstream. This has led to the proliferation of one of the main invasive species affecting the health of the river and the quality of environmental flows in the Umgeni is the water hyacinth. DUCT is using its resources to clear the river of water hyacinth and other species, such as water lettuce and balloon vine using an assortment of bio-control agents (weed eating bugs), herbicides and weed machines. DUCT also focuses on the issue of sand mining by the Department of Natural Resources (MNR). The construction industry and small-scale brick makers use the sand in their manufacturing. According to DUCT, the MNR receives upwards of 20

applications a day for sand mining permits. However, many are circumventing the permit process and mining for the sand illegally, ultimately altering the state of the riverbed. DUCT has made numerous requests to MNR for a map of the legal sand mining operations so it can monitor activity and work with the municipality to enforce regulations. When asked who should be present at the CMF the most, they replied, MNR so that the conservancies and municipality can work collaboratively with them.

6.1.5 KwaZulu Natal (KZN) Conservancies Association

The representative from KZN Conservancies spoke briefly about the little success that catchment management forums have had in fostering participation. They said that DWEA assumes people will be interested and have the time and financial means to participate. They also stated that the timing of forum meetings to be a deterrent. The growth of conservancies, on the other hand, according to KZN Conservancies is due to the fact that residents are concerned about the areas they live in and the health of their environment. However, this attitude seems not to have been translated into broader participation in catchment management forums.