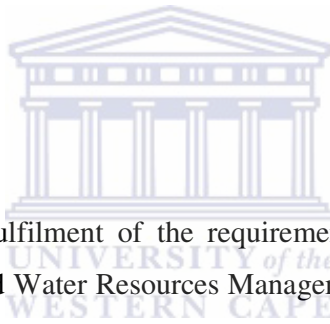# Public Participation as governance: the role of catchment forums in water governance

## Mluleki Matiwane

A thesis submitted in partial fulfilment of the requirements for the degree of Master of Natural Science in the Integrated Water Resources Management Program (IWRMP), Faculty of Science, University of the Western Cape.

Supervisor: Mr Lewis Jonker

September 2012

**DECLARATION**

I declare that Public participation as governance: the role of catchment forums in water governance is my own work, that has not been submitted before for any degree or examination in any other university, and that all sources I have used or quoted have been indicated and acknowledged by complete references.

Mluleki Matiwane                                          September 2012

Signed.................................................

# ABSTRACT

Catchment forums are concerned groups of people that come together on a voluntary basis in a specific area. They share the same goal and purpose to achieve - sustainable water resources management. These Catchment Forums are suppose to give a voice for those who are marginalised, by creating a safe space in smaller gathering of familiar people on water issues.

Higher level organisations such as Department of Water Affairs and Forestry and Catchment Management Agencies have a responsibility to look after these forums. The main focus of this research is to develop an in-depth understanding of these catchment forums, elaborate on the role they play in water resources management, what impact or influence they have on governance in the catchment and the difficulties that they experience through the process of acting as custodian of water resources. Another crucial part of this research is to describe public participation approached by Department of Water Affairs and Forestry in the process of writing the proposal to establish a catchment management agency, determine the role of catchment forums in the establishment of catchment management agency in the Olifant-Doorn Water Management Area and the necessity of these forums as an organisational type in the establishment of catchment management agency. Minutes from the meetings of the Reference Group in the Olifants-Doorn Water Management were therefore the primary source of data. Additional data sources were approved proposals and field notes. Consultants who facilitated the public participation process were consulted from time to time to verify information.

The National Water Policy hints at an ideal state where all residents of a catchment are in a position to negotiate water allocation and resolve resource-based conflicts in an equitable manner. One of the key themes evident in the Nation Water Policy of South Africa and echoed in the National Water Act and Water Service Act is participatory water management. For the public participation process in the Olifants-Doorn Water Management Area, catchment forums almost seemed unnecessary, since there were 38 other stakeholder groups active. This study has shown that catchment forums in the Olifants-Doorn Water Management Area participated at the level of collaborate. When it is taken into consideration that the higher level includes all the lower levels, catchment forums had sufficient opportunity to influence the decision taken in the process of writing the proposal to establish the Olifants-Doorn Catchment Management Agency, without experiencing the need or having the clout to actually make the decision.

Key words: Catchment Forums, Catchment Management Agencies, decision-making, governance, iwrm, public participation

# TABLE OF CONTENTS

iii

**TABLES AND FIGURES**

**TABLES**

**FIGURES**

# ACKNOWLEDGEMENTS

# CHAPTER 1

# BACKGROUND TO THE STUDY

## 1.1.    Introduction

Principle 23 of the Fundamental Principles and Objectives for a New Water Law for South Africa (DWAF, 1997) states: "Responsibility for the development, apportionment and management of available water resources shall, where possible and appropriate, be delegated to a catchment or regional level in such a manner as to enable interested parties to participate".

To give effect to this principle, the White Paper on a National Water Policy for South Africa, (1997), and the National Water Act, (Act No 36 of 1998), establishes catchment management agencies and water user associations. In a Department of Water Affairs and Forestry publication titled "Water Management Institutions Overview", (de la Harpe et al. undated), a third institutional type, the catchment forum, was introduced.

According to de la Harpe et al. (undated), "A catchment management agency is a statutory body established in terms of the National Water Act" "A water users association is a statutory body established by the Minister under the National Water Act"; and "catchment forums, which are non-statutory bodies, may be established to support the establishment of a catchment management agency". The role of catchment forums is narrowly defined in terms of being a vehicle for public participation to support the establishment of catchment management agencies. However, at the same time it is also foreseen that the catchment forum will play a broader role in 'institutional development', and have a 'consultative-advisory' role (de la Harpe, undated). Although catchment forums are non-statutory, the Department of Water Affairs and Forestry seems to regard them as sufficiently important to invest resources in and guidelines on how to establish catchment forums (Hart, undated), and to invest resources in the establishment of a number of catchment forums (Swatuk, 2008).

In South Africa the crucial political change of 1994 played a vital role in the process of institutional reforms. According to Backeberg (2005), the fundamental changes in the history of South Africa, as started in the form of new water legislation in 1912, 1956 and 1998, were also preceded by political change, such as unification in 1910, election of the National Party in 1948, and the election of the African National Congress in 1994.  This process of

institutional transformation took place not only in South Africa. Institutional reform is motivated by circumstances and conditions that cannot be understood and explained by a model of institutional change that regards a new law as either contributing to economic efficiency or as simply redistributing income (Bromley 1989). According to Saleth and Dinar (2004), water institutions can be defined as "rules that together describe action situations, delineate action sets, provide incentives, and determine outcomes both in individual and collective decisions related to water development, allocation, use and management. Like all institutions, water institutions are also subjective, path dependent, hierarchical, and nested both structurally and spatially and embedded within the cultural, social, economic and political context" (p 2).

Before 1994 in South Africa there were many problems that affected the majority of people, such as gender inequalities, and lack of access to clean and sufficient water and to adequate sanitation. The process of institutional reform was meant to play a role in mitigating and addressing those challenges to meet the needs of the majority population. The White Paper (1997) specifically addresses the issue of gender inequality, since women were and still are disadvantaged when it comes to access to water. The policy makes it clear that women should be represented at all levels and in all spheres of water management activities, in political, technical and managerial positions.

The important expectation of the process of change is addressing the issues Swatuk (2005) mentions. These are the impact of current water management practices on natural and human environments (degraded physical landscapes and declining water quality and quantity through waste and crumbling infrastructure), the importance of water in poverty reduction/eradication, the gendered nature of inequitable access to safe water and sanitation, and the actions that must be taken if water resources are to be sustainably managed.

The ideological framework for analysing the impact of political change on institutional reform can be developed, based on a hierarchy of decision-making at three levels within an integrated water system. The first is the operational level. This level is based on the management of the allocation and use of water resources by individuals and organisations, as influenced by the institutions within which decisions are made. The second is the institutional level. This is the set of institutions (e.g. authority, water rights and water legislation) as

determined by policy. The third is the policy level, which is an output of the political process set within the boundary of the constitution (Backeberg 2005).

The political change in 1994 had a crucial effect on the water sector. Because of that change, institutional reform was initiated. Through the process of institutional reform, the 1956 Water Act was replaced by the National Water Act of 1998, and through the 1998 Act, the Department of Water Affairs and Forestry was empowered to decentralise water management by establishing a catchment management agency and a water user association. The notion behind this was to delegate the responsibility for water resource management to the local level.

The purpose of institutional reform is to decentralise the power or decision-making to the lowest level, where everybody has a voice in any matter that may affect them. In South Africa the process of decentralisation in the water sector led to the establishment of catchment management agencies and water user associations, and organisations such as catchment forums. Voluntary organisations also played a role in driving the process of decentralisation by involving themselves in public participation processes of water issues. In South Africa one of the processes that indicated the concept of decentralisation (Jaspers, 2003) is that catchment management agencies may be established for specific geographical areas, after public consultation, on the initiative of the community and stakeholders concerned (in cases where a proposal is not coming from the stakeholders, the minister may establish a catchment management agency on his or her own initiative). According to Jaspers (2003 pg 79), institutional arrangements are sets of working rules that are used to determine who is eligible to make decisions in some arena, and what actions are allowed or constrained. Decentralisation is the process of transferring executive tasks and/or competencies from the centre of authority, to organise or implement a (government) function.

The process of institutional reform was not only happening in South Africa. The institutional arrangements governing the water sector were undergoing remarkable changes. Such changes which have been observed, especially during the past decade or so, are due more to purposive reform programmes than to the normal process of institutional evolution (Saleth and Dinar 2004 p 1). In 1992, Dublin was the setting for the International Conference on Water and the Environment. The conference came up with four key principles as follows:

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;

4. Water has an economic value in all its competing uses, and should be recognised as an economic good (Dublin 1992).

These four principles inform, if not underpin, the character and content of current water reforms in Southern Africa (Swatuk 2005).

The second principle asserts that participation by all stakeholders and individuals at all levels is very crucial in the water sector in order to manage water resources at all levels.

Proponents of public participation claim that public participation leads to improved decision-making, by making the process that is adopted by an initiative transparent, inclusive and fair. This creates trust and a shared vision among stakeholders, who are then more willing to contribute their ideas, needs, suggestions or information. This adds to the technical and scientific content of the information that informs decisions about the initiative. Enhanced content improves decision-making (Chamber of Mines of South Africa, 2002). Thus public participation is participation by engaging all people equally in decision-making, and everybody must be part of a decision.

According to the Department of Water Affairs and Forestry, the term public participation is an overarching term that describes the relationship that exists between Department of Water Affairs and Forestry and stakeholders during the Department of Water Affairs and Forestry initiatives. The nature of a planned public participation process will depend on the characteristics of the Department of Water Affairs and Forestry initiative, and the goals of the initiative. Public participation must involve decisions that will satisfy those who are involved in the process of participation, because in some instances stakeholders only need to be made aware of certain information or initiatives; in other cases stakeholders' opinions and views should be considered for incorporation into the process of the Department of Water Affairs

and Forestry initiative, in order to improve decision-making and sustainability (DWAF, 2001).

The National Water Act (Act no 36 of 1998) states clearly that public participation must be part of each and every process that government wants to achieve, in order for all interested people to participate in water issues. Chapter 2 of this Act, under the water management strategies as part 1 of the Act, states that the progressive development by the Minister after consultation with society at large for national water resource strategy (sentence incomplete). The national water resource strategy provides the framework for the protection, use, development, conservation, management and control of water resources for the country as a whole. In the preamble to Part of 2 of the National Water Act it is stated that a catchment management agency "must seek co-operation and agreement on water-related matters from the various stakeholders and interested persons". One of the initial functions of a catchment management agency is "to promote community participation in the protection, use, development, conservation, management and control of the water resources in its water management area" (NWA, section 80 (e). Furthermore, "public consultation" is also mandated by the National Water Act in the process of establishing a catchment management agency. As indicated on page 1, catchment forums were conceived as a vehicle to facilitate the public participation process in the catchment management agency establishment process. Not only could catchment forums facilitate public participation during the establishment of a catchment management agency, they could also be the vehicle to promote community participation, as envisaged under section 80 (e) of the National Water Act.

## 1.2. Problem Statement

The Department of Water Affairs and Forestry regarded catchment forums as an important institutional type in the establishment of catchment management agencies. After the establishment of catchment management agencies, catchment forums are seen to be able to play a consultative-advisory role to the Department of Water Affairs and Forestry, a water-support management role to the catchment management agency, and a consultative-advisory role to municipalities in connection with the Integrated Development Plan (IDP). With the role-description of catchment forums being suggestive rather than prescriptive, it is questionable whether the catchment forums would have any real influence on water management issues.

**1.3.        Aim of the Research**

The aim of the research is to understand the role of catchment forums in the public participation process in the Olifants-Doorn Water Management Area.

The specific objectives are:

(a) To describe the approach of the Department of Water Affairs and Forestry to public participation in the establishment of catchment management agencies;

(b) To determine the role of catchment forums as vehicles of public participation in the process of writing the proposal to establish a catchment management agency in the Olifant-Doorn Water Management Area;

(c) To assess whether a catchment forum is a necessary organisational type in the establishment of a catchment management agency;

# CHAPTER 2

# LITERATURE REVIEW

## 2.1. Introduction

It is important to seek and understand what other sources say about everything that is related to a research topic. By doing that we will get a clear picture of what other authors are saying about the information that is basic to our research, in order to come up with vital and explicit answers to our questions in our research. Literature review helps us to know or obtain similar or relevant work done by other authors. Different views and ideas can come up with a concrete or mutual output for this research, so the significant of other authors' ideas can lead the research to a clear direction to what we want to achieve. This shows us that this research cannot be successful without consulting other authors' ideas from different sources. The key concepts that will lead the literature review, such as Integrated Water Resource Management, governance, decentralisation, decision-making, water management organisations, public participation and levels of public participation (sentence incomplete). These key concepts are extremely important in my study, because they give direction to what is supposed to be achieved as the topic leads us through these concepts.

## 2.2. Governance

The term 'governance' has been used to describe a wide array of situations or conditions, that include the roles and responsibilities of government, civil society and the business sector, decision-making processes, management actions at all levels, the behaviour of individuals and communities, institutional structures and settings, legal and statutory instruments, and idealised processes of participation or collaboration (Ashton et al. 2006). Governance is defined by Turton et al. (2007) as ''the process of informed decision-making that enables trade-offs to be made between competing users of a given resource so as to mitigate conflict, enhance equity, ensure sustainability, and hold officials accountable''. According to Funke et al. (2007) "governance is seen both as a process, that involves a number of distinct elements, including decision-making about contentious issues, and as a product, where effective Integrated Water Resource Management is the product of good governance.

8

Governance structure also plays an important part in the form of the institutional framework that underpins Integrated Water Resource Management".

The manner in which the concept "governance" is defined above shows that governance is based on all stakeholders, individuals and government, working together in order to exercise the (Tropp 2007) economic, political and administrative authority (Turton et al. 2007), ensuring sustainability, (equity and efficiency in such a manner where available resources (Ashton et al 2006) must be managed at all levels). It seems as if good governance is a priority in Integrated Water Resource Management, as indicated in the literature. This literature shows that integrated water resources management must involve good governance. Ashton et al. (2006) list principles of good governance such as openness, participation, accountability, effectiveness and coherence.

In their description (as opposed to definition) of Integrated Water Resource Management, many authors express the view that governance is a critical part of Integrated Water Resource Management. The UNDP (2006) stated that the 'crisis of water is a crisis of governance". Jonker (2007) constructed a framework of Integrated Water Resource Management from the description in the White Paper on a Water Policy for South Africa. From the White paper he identified four elements of Integrated Water Resource Management, namely resource protection, appropriate land use, efficient water use, and good governance.

According to Van der Zaag (2005), the challenge resides in political processes. Van der Zaag also asserts: "It is also our task to assist our governments in achieving the MDGs. The implementation of Integrated Water Resource Management requires real participation of stakeholders and transparent decision-making processes". In a way this statement is a different method of speaking about governance.

Rahaman and Varis (2005) reported that governance was a key issue at the Third World Water Forum in Kyoto in 2003, where the forum recommended Integrated Water Resource Management as the way to achieve sustainability of water resources. The Ministerial Declaration addressed good water governance as part of a range of issues that are necessary in Integrated Water Resource Management. The Ministerial Declaration addressed the necessity of sharing benefits equitably, engaging with pro-poor and gender perspectives in

water policies, facilitating stakeholder participation, ensuring good water governance and transparency, building human and institutional capacity, developing new mechanisms of public-private partnership, promoting river basin management initiatives, cooperating between riparian countries on transboundary water issues, and encouraging scientific research.

When governance is good governance there are principles such as transparency, accountably, decentralization, and participation are now widely incorporated in polces of governments and international development agencies. Empowerment of local communities and natural resource users is frequently advocated, as a means of promoting democracy, equity and better management of natural resources (Bruns 2003).

Water governance refers to the range of political, social, economic and administrative systems that are in place to develop and manage water resources, and the delivery of water services, at different levels of society (Global Water Partnership 2002).

There is very huge correlation between good governance and water governance; this indicated by principles for effective water governance such as open and transparent, inclusive and communicative, coherent and integrative, equitable and ethical, accountability, efficient, responsive and sustainable (Rogers and Hall 2003).

Water governance has been defined as the range of political, social, economic and administrative systems that are in place to develop and manage water resources, and the delivery of water services, at different levels of society (Tropp, 2007). Tropp also indicates that despite alternative approaches to defining new forms of governance, some similar features can be identified, namely:

(a) Governance is seen as a process of interaction rather than as a formal institution/regime.

(b) Governance, based on accommodation rather than domination-decision-making, is increasingly based on negotiations, dialogue and networking.

(c) Governance provides alternatives to top-down hierarchy, such as through horizontal networks.

(d) Governance includes both private and public sectors, and the interactions and relationships between them are critical for governance outcomes.

(e) Governance is action-orientated (governance for the common good or for solving common problems) and appears at all scales, from local to global.

(f) Authority is still considered important, but it does not necessarily take the form of government authority.

(g) There is an emphasis on relationships, networks and organisation of collective action.

From the above, it seems that governance looks to flexibility and informal institutions, such as networks that often escape formal government structures.

The Integrated Water Resource Management literature suggests that public participation and governance are essential elements in water resources management. A cursory review of the general governance literature (as opposed to the Integrated Water Resource Management literature) confirms the link between public participation and governance. According to Rhodes (1996), "good governance involves: an efficient public service; an independent judicial system and legal framework to enforce contacts; the accountable administration of public funds; an independent public auditor, responsible to a representative legislature; respect of the law and human rights at all levels of government; a pluralistic institutional structure, and a free press".
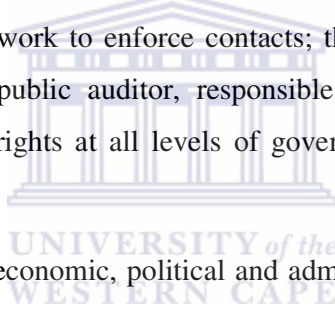
"Governance is the exercise of economic, political and administrative authority to manage a country's affairs at all levels. It comprises the mechanisms, processes and institutions through which citizens and groups articulate their interests, exercise their legal rights, meet their obligations, and mediate their differences" (UNDP 2006). From these definitions (?) it seems as if governance involves both the public and the government in managing all of the country's affairs.

According to Rhodes (1996), there are at least six separate uses of the term governance:

(i) Governance as the minimal state: government reduces the size for using private companies for the delivery of public services.

(ii) Governance as corporate governance: this kind of governance is used in business and relates to matters of transparency, accountability and integrity in doing business.

(iii) Governance as the new public management: the introduction of managerialism into public service. Things such as performance, managing by results, value for

money, etc, must involve closeness to the customers; therefore the public is referred to as customers or clients.

(iv) Governance as 'good governance': the priorities of good governance are transparency, effective public service, an independent judicial system, accountable administration of public funds, respect for law, human rights, and free press.

(v) Governance as a socio-cybernetic system: the interaction between voluntary sectors, local government, public, private sector, etc; all of them are in a state of negotiation, more especially the several affected parties. The important thing is that these parties are working together to achieve a certain goal.

(vi) Governance as self-organising networks: all the organisations are in a process of working together for service delivery. Networks are a sort of alternative for public, private and voluntary sectors, relaying to government networking in order to reach a state of autonomy and self-governance.

Stoker (1998) identifies five propositions of governance:

(i) Governance refers to a set of institutions and actors drawn from but also beyond government.

(ii) Governance identifies the blurring of boundaries and responsibilities for tackling social and economic issues.

(iii) Governance defines the power and dependence involved in the relationships between Institutions involved in collective action.

(iv) Governance is about autonomous self-governing networks of actions.

(v) Governance recognises the capacity to get things done, which does not rest on the power of government to command or use its authority.

The connection between governance and public participation (Tropp, 2007; Rhodes, 1996; Stoker, 1998) enhances the status of public participation in that it changes the process from a trivial exercise, where stakeholders are merely kept informed on water issues, to a substantive exercise where stakeholders become partners in addressing these issues. It is therefore difficult to understand why most of the definitions of IWRM do not include public participation in their formulations. However, excluding public participation from the definition does not mean the authors think that public participation is not important.

Dukhovny et al. (2004) states: "it is clear that public participation should create an atmosphere of transparency and openness, reducing the risk to make decisions being in contradiction with public interests". They believe that if there is more public participation there is less possibility for corruption and public interests neglect. Rahaman and Varis (2005) use the same definition of GWP (2000). Although they subscribe to the same definition, they also notice that something must be added, when they "emphasized that water should be managed in a basin-wide context, under the principles of good governance and public participation". Clausen and Fugl (2001) indicate that it is a need to involve the concerned stakeholders in the management and planning of water resources, because it is universally recognised as a key element in obtaining a balanced and sustainable utilisation of water.

Van der Zaag (2005) is of the opinion that "in order to achieve IWRM, as it seems a very ambitious task, requiring most of all a transparent and inclusive decision-making process". He believes that out of the 'transparent and inclusive decision-making', integrated water resources management is therefore an approach, a perspective, and a way of looking at problems and how to solve them. He emphasises that not any one person can claim to know what is the right solution to a problem; the right solution is the agreed solution, the solution over which consensus among all interested parties has been reached. With his reference to 'all interested parties', Van der Zaag clearly indicates that public participation is required for the implementation of Integrated Water Resource Management.

Dungumaro and Madulu (2003) are supportive of the idea of public participation. They state that, in order to have effective water resources management, it is crucial to strengthen local community involvement in identifying the problems that affect them, and strategies to solve them. They also emphasise that the involvement of local communities in water projects does not only ensure democracy but also ensures acceptability, support, and sustainability of the respective projects. They add that Integrated Water Resource Management should mean ensuring that local communities' voices and interests are heard. This means empowering local communities with the necessary tools to take care of their own welfare by ensuring that their voices are heard, and their interests are taken into account.

Savenije and Van der Zaag (2008) describe the evolution of water management as moving from water resources development to Integrated Water Resource Management. In the 1960s the issue of water was focused on water resources development; in the 1980s water issues were focused on water resources management; and then, from the 1990s to the present, the water issues have been focused on integrated water resource management (IWRM). Savenije and Van der Zaag suggest that public participation was something that became an issue in water management in the 1990s, and that it was absent from the water management discourse prior to the 1990s.

Public participation in South Africa was not only encouraged by developments in the international arena, but was also a national political imperative. According to Funke et al. (2007), the people of South Africa have recently (1994) participated in a national democratisation process and now feel a growing need to participate in and contribute to decision-making processes. On their reasons for participation they stated that, while this may be partly as a result of their lack of trust in, and the lack of legitimacy of, previous delivery systems and social services, it is also important for people to be drawn into the planning and management aspects to ensure that their concerns and requirements are met, and that they receive appropriate delivery of resources. Local community participation can also provide an important source of information, experiences and ideas that could lead to practical, relevant, achievable, and acceptable solutions to water-related problems. This view is  supported by Dungumaro and Madulu (2003), who state that the benefit of involving local communities in water resource management is that they often possess a particular knowledge of a resource – known as indigenous knowledge – which can help to generate new options when it comes to environmental protection, including proper water resource use and management. A case study in Tanzania indicated that the local communities in various areas of Tanzania have developed coping strategies to ensure the conservation of water resources. These strategies were used to involve local communities in irrigation projects in order to be part of what was happening in their area. The variable of empowering the stakeholders with capacity to negotiate is especially important for meaningful participation (Dungumaro and Madulu 2003).

Public participation is held out to be very significant in integrated water resource management. There are indications that although most people involved in the water sector support the involvement of local community in water management, the level of involvement

in most developing countries is still low. The importance of community involvement in integrated water resource management or in other environmental issues seems to be based on three reasons:

(i)     The emergence of participatory approaches demonstrates the importance of local communities' consent in taking part in public decision-making processes, especially on issues that directly affect their welfare. In this context, the local community participation could provide an important database, experience and ideas that could lead to practical, relevant, achievable and acceptable solutions to water-related problems.

(ii)    The need to use the knowledge and ideas of the local population is vital to environmental protection, including proper water resource use and management.

(iii)   The need to build public trust: lack of public trust may lead to protest and antagonism between water resource users and other stakeholders, due to varying interests and demands (Dungumaro and Madulu 2003).

Despite the moral and political imperative for public participation Funke et al. (2007) remind us that ensuring that all stakeholders are actively involved in decision-making processes is a huge challenge at best and, at worst may be impossible to realise.

## 2.3. IWRM

The first authoritative definition of Integrated Water Resource Management was formulated by the Technical Advisory Committee of the Global Water Partnership (2000). They defined Integrated Water Resources Management (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".

Pollard (2002) defined Integrated Water Resource Management as follows: "Equitable access to and sustainable use of water resources by all stakeholders at catchment, regional and international levels, while maintaining the characteristics and integrity of water resources at the catchment scale within agreed limits".

Jasper (2003) defines integrated water resources management as "the management of surface and subsurface water in a qualitative, quantitative and environmental sense from a multi-disciplinary and participatory perspective".

Integrated Water Resource Management is a system based on an account of all types of water (surface, ground, return) within hydro-graphic boundaries, which connects interests of various sectors and hierarchic levels, and promotes effective water use in the interest of sustainable development of society and ecologic security (Dukhovny et al 2004).

Merrey et al. (2005) define Integrated Water Resource Management as follows: "Integrated Water Resource Management is involving the promotion of human welfare, especially the reduction of poverty, encouragement of better livelihoods and balanced economic growth through effective democratic development and management of water and other natural resources in an integrated multilevel framework that is equitable, and conserves vital ecosystems".

Van der Zaag (2005) defines Integrated Water Resource Management as: "Integrated water resources management means reconciling basic human needs, ensuring access and equity with economic development and the imperative of ecological integrity, while respecting transboundary commitments".

In connection with the above definitions the following observations can be made. Firstly, every one of the above definitions emphasises the importance of ecological integrity, albeit in different formulations; for example: "without compromising the sustainability of vital ecosystems" (GWP, 2000); "maintaining the characteristics and integrity of water resources" (Pollard, 2002); "environmental sense" (Jaspers, 2003); "ecologic security" (Dukhovny, 2004); "conserves vital ecosystems" (Merrey et al; 2005); "ecological integrity" (van der Zaag, 2005). Secondly, economic and social development is explicitly mentioned in all but one (Jaspers, 2003) definition. Thirdly, most definitions refer to water only, while two (GWP, 2000; Merrey, 2005) refer to 'other resources' as well. Fourthly, only one of the definitions (Jaspers, 2003) explicitly refers to a 'participatory perspective'. Finally, despite the clear description of what Integrated Water Resource Management is, none of the formulations in

any of the definitions are such that they can be used to measure the implementation of Integrated Water Resource Management.

Jonker (2007) defines Integrated Water Resource Management as follows: "Integrated Water Resource Management is a framework within which to manage people's activities in such a manner that it improves their livelihoods without disrupting the water cycle". Jonker's definition includes social welfare as well as ecological concerns, and it seems to make measuring Integrated Water Resource Management possible. Three years after his first definition, Merry (2008) defined Integrated Water Resource Management as follows: "Integrated Water Resource Management is a participatory planning and implementation process, based on sound science that brings stakeholders together to determine how to meet society's long-term needs for water and coastal resources, while maintaining essential ecological services and economic benefits".

The second Dublin Principle is: "Water development and management should be based on a participatory approach, involving users, planners and policy-makers at all levels". Despite the Dublin Principles being widely accepted as Integrated Water Resource Management principles, only two of the definitions cited above refer explicitly to public participation. Notwithstanding this omission, the post-1994 environment policy in South Africa included public participation in almost every water management action.

## 2.4. Levels of public participation

Public participation has different levels, and various authors share different and similar levels in order to show that participation is not a homogeneous process. The focus of this section will be more on the levels as developed by Arnstein's (1969) ladder of Citizen Participation, Brun's (2003) extended ladder of participation, Choguill's (1996) ladder of community participation for underdeveloped countries, Berke's (1994) levels of Co-management, Connor's (1988) new ladder of citizen participation, and International Association for Public Participation Spectrum (IAP2).

The International Association for Public Participation has fewer levels than all other sources mentioned above. It consists of five levels of participation, namely, inform, consult, involve,

collaborate, and empower. Arnstein's ladder consists of eight levels or rungs, namely, manipulation, therapy, informing, consultation, placation, partnership, delegated power, and citizen control. Connor's (1988), a new ladder of citizen participation, consists of seven levels, namely, resolution, prevention, litigation, mediation, joint planning, consultation, information-feedback, and education. Brun's (2003) consists of nine levels of participation, namely, enable, advise, establish autonomy, delegate authority, partner, collaborate, involve, consult, and inform. Berke's (1994) consists of seven levels of participation, namely, community control, management boards, advisory committees, consultation, informing, co-operation, and communication. Choguill's (1996) ladder consists of eight levels, namely, empowerment, partnership, dissimulation, informing, conspiracy, self-management, diplomacy, and conciliation.

| Arnstein (1969) | Bruns (2003) | Choguill (1996) | Berkes (1994) | Connor (1988) | AIP2 |
|---|---|---|---|---|---|
| Citizen control | Establish autonomy | Empowerment | Community control | Litigation | Empower |
| Delegated power | Delegate Authority involve | | Management Boards | | Involve |
| Partnership | Partner Collaborate | Partnership | Advisory committees | Joint planning | Collaborate |
| Placation | | Dissimulation | | Mediation | |
| Consultation | Consult | | Consultation | Consultation | Consult |
| Informing | Inform | Informing | Informing | Information-feedback | Inform |
| Therapy | | Conspiracy | | | |
| Manipulation | | Self-management | | | |
| | Enable | Diplomacy | Co-operation | Resolution/prevention | |
| | Advise | Conciliation | Communication | Education | |

Table 1: Levels of participation as depicted by different authors

According to Du Toit and Pollard (2008), the five levels of public participation spectrum are not all applicable in South Africa. "Empower", as an autonomous decision-making process, is part of the participation spectrum. However, this option does not exist within the South

African legal context. The public is provided with the opportunity to participate in a collaborative manner but not to take autonomous decisions.

The five authors and IAP2 mentioned above believe that public participation is not a single process. Rather, there are different levels of evaluating participation. These authors share some similarities in their levels, for example, the most common levels that are present in the five authors and IAP2 ladder are inform and consult. All five authors, as well as the IAP2, identify these two levels as the popular levels in public participation. These two levels are the ones the public will always be experiencing, whereas the other levels are not always implemented during the process of public participation. More especially the level of "citizen control" or "empower" is rarely found in public participation.

Arnstein (1969), Connor (1988), and Choguill (1996) group their levels. Arnstein (1969) grouped her levels into three categories. The first category is *non-participation,* which includes manipulation and therapy; second is the *degree of tokenism,* which includes placation, consultation, and informing, and third is *the degree of citizen power,* which includes partnership, delegated power, and citizen control. Connor (1988) grouped his ladder into two parts. The first part is the *leaders,* which includes litigation, mediation, joint planning, and the second part is the *general public,* which includes consultation, information-feedback and education. Choguill (1996) grouped his ladder into four parts. Firstly is *support,* which includes empowerment, partnership, and conciliation; secondly is *manipulation,* which includes dissimulation, diplomacy, informing; thirdly is *rejection,* which includes conspiracy, and fourthly is neglect which includes self-management.

From the table above it seems that there is a similarity in the ladders of Arnstein (1969) and IAP2, Berkes (1994), and Bruns (2003), Choguill (1996) and Connor (1988). Bruns published his paper in 2003, and the title indicates that Bruns extended his ladder from various authors. This shows that this is not a new ladder, because most of the levels that Bruns used are those coming from Arnstein, IAP2, Berkers, etc. The levels of public participation vary, but what is important is that the authors agree that there are levels which must be considered when it comes to the analysis of public participation. The other thing in common among these authors is that there is a stage where community is being manipulated. Arnstein (1969) and Choguill (1996) agree on that, although in Choguill there is not one level but rather a group of levels. The direction emanating from these levels is that the public has a right to participate. In order

to make participation possible these levels guide any government or organisation to what extent they need to involve the public in development processes.

All these levels are significant, except those Arnstein names non- participation. The problem with many public participation processes is the manner of implementation, in that some of the levels are not considered in the processes of public participation. This leads from what Alterman (1982) believed about Arnstein's ladder (1969), that the only 'real' participation is one where there is at least full partnership and preferably full control by the participants. Otherwise, it is 'manipulation', 'tokenism', or the like. This leads to Greg (1999), "effective public participation enables participants to become aware of values which they had not previously considered, and enables opposing groups to consider or develop new ones which might resolve conflicts".

Theron et al. (2007) apply the IAP2 levels to the South African context. In South Africa the level of consultation is understood as, at best, a weak form of 'consultation', and thus the same applies to the level of 'involvement' as the opposite from the way IAP2 says it should be; rather it suggests co-optation, placation, manipulation, and the like. The Integrated Development Planning (IDP) process in South Africa encourages the public to be active citizenry, and a full partner in decision-making with government and other organisations or stakeholders. Theron et al. (2007) further explain about the current state of Integrated Development planning; in the South African context 'public participation' can mean nothing less than 'collaboration', as characterised by the public participation spectrum. The level of 'empowerment' or control is not in the South African political vocabulary (Du Toit and Pollard 2008). In typical 'developing nation' fashion, the state controls almost all development. On the other side Bruns (2003) highlighted the point that the Arnstein (1969) ladder has inadequate and unsatisfactory low levels of participation such as manipulation, therapy, placation, and tokenism, all carrying strong negative connotations, while sharing a concern as to whether consultation and other forms of involvement offer genuine influence or only the appearance of participation.

## 2. 5. Significance of public participation

According to the Department of Water Affairs and Forestry the objectives of public participation are to improve decision-making and to ensure sustainable development. "The term "public participation" is an overarching term that describes the relationship that exists

between the Department of Water Affairs and Forestry and stakeholders' planned public participation process will depend on the characteristics of the Department of Water Affairs and Forestry initiative and the goals of that initiative. In some instances stakeholders only need to be made aware of certain information or initiatives; in other cases stakeholders' opinions and views should be considered for incorporation into the process of the Department of Water Affairs and Forestry initiative, in order to improve decision-making and sustainability" (DWAF 2001). Public participation is involving everybody to participate in the issues, for instance, all stakeholders must participate in water management issues. Why do we need public participation? Firstly, public participation is a priority in a democratic country; secondly, we need public participation in order for those who are marginalised or voiceless to be heard.

Public participation is a way of reaching consensus in water issues, or any other issue that impacts on people's needs. Henriksen et al, (2006), in their study on the management of groundwater contamination in Copenhagen in Denmark, modelled the process as about reasoning and decision-making about whole systems, using computer-based modelling and analysis technology, and with the active involvement of stakeholders. Henriksen et al. categorised the guidelines on public participation in three levels:

- Information provision (about management, timetables, issues to the participants. It is considered the foundation for all further participation activities).

- Consultation (encouraging written and oral responses).

- Active involvement (involving people in "developing and implementing plans" that could form the final plan decided upon) (Henriksen et al. 2006).

"In the broadest sense, community participation may be thought of as an instrument of empowerment. According to this view, development should lead to an equitable sharing of power and to a higher level of peoples', in particular the weaker groups', political awareness and strengths" (Choguill 1996).

The significance of public participation is highlighted in a study of King et al. (1998). In that study they concluded that the participation of administrators, activists, and citizens is necessary and desirable. One of the citizens stated that "the necessary opportunity to be part of something bigger than oneself is a part of our responsibility to our community". One of the

activists made the point that "it is very important to have an opportunity to influence and to know that your influence has the potential to make a difference". The administrators also show a sense of agreement with what the citizens and activist mentioned about participation. The administrators also stressed the centrality of input: "we need input"; "we don't make good decisions without it"; "it is essential" (King et al. 1998 pg. 319).

The significance of making public participation a priority in decision-making is to get all who are involved in a case to work together towards a common goal. Greyling (1998) emphasised that considering the following definition of public participation will result in every one understanding the significance of public participation; "Public participation is a process leading to a joint effort by stakeholders, technical specialists, the authorities, and the proponents, who work together to produce better decisions than if they had acted independently". For this to happen, improved decision-making must be the central aim of the public participation process (Greyling 1998).

The International Association of Public Participation has developed the "Core Values for Public Participation" for use in the development and implementation of public participation processes. The purpose of these core values is to help make better decisions which reflect the interests and concerns of potentially affected people and entities, such as follows:

(i) The public should have a say in decisions about actions that affect their lives.

(ii) Public participation includes the promise that the public's contribution will influence the decision.

(iii) The public participation process communicates the interests and meets the process needs of all participants.

(iv) The public participation process seeks out and facilitates the involvement of those potentially affected.

(v) The public participation process involves participants in defining how they participate.

(vi) The public participation process provides participants with the information they need to participate in a meaningful way.

(vii) The public participation process communicates to participants how their input affect the decision (Greyling 1998).

This means that, in order for the water users' association, the catchment agency, and the Department of Water Affairs and Forestry to take decisions, it is compulsory for them to consult the affected parties in order to come to an agreement or consensus that will involve or favour every stakeholder that is part of the participation process. People who are affected by a certain decision, or policies, or piece of legislation, need to be consulted before the decision can be finalised. Consultation usually takes place by asking people to comment on a document, which they can obtain from a public office. Many government documents allow for comments before they can be approved, often through holding a public meeting where a presentation is given and people are asked to comment afterwards. Consultation is usually used when broad public consensus is needed. Anyone can participate by commenting on any issues that are related to what is being discussed at that particular time. It shows those catchment forums and other role-players such as water users association, catchment management agency, and the Department of Water Affairs and Forestry are supposed to share their ideas and negotiating, in order to come out with a decision or solution (Burt 2006).
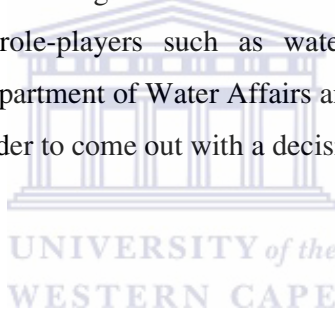
## 2. 6. Decentralisation
### 2.6.1. Definitions:

Decentralisation is a system for administering development in which communities of interest are recognised as having legal status (at the local level) (Hubert and Ouedraogo 2003). Decentralisation is a process, a shift in the locus of power from the centre towards the periphery (Diana 1995). In other words, decentralisation can be seen as a process of implementing public participation in water resources management.

According to Heller (2001), "Decentralization contributes to democratic deepening if and when it expands the scope and depth of citizen participation in public decision-making. Expanding the depth means incorporating previously marginalized or disadvantaged groups into public politics". On the other hand, "democratic decentralization, in other words, means redistributing power (the authority to make binding decisions about the allocation of public resources) both vertically (incorporating citizens) and horizontally (expanding the domain of

collective decision-making)" (Heller, 2001, p.140). This means that decentralisation must involve all citizens in decisions around them that involve their resources. It should not be limited to a group of people who believe that they are the experts and therefore know what people want. Rather, the experts should work with the community or citizens to reach consensus.

According to Ribot (1999), "Decentralisation is the devolution of state powers or assets to local decision-making bodies, including non-state associations (NGOs, co-operatives, associations, etc.) or private individuals and corporations". Decentralisation is the transfer of powers to a lower level of government and is thought to encourage more efficient and equitable management of natural resources. Participation of civil society organisations (CSOs) is considered critical in creating positive outcomes of decentralisation (Brannstrom et al 2004).

All the above definitions indicate the main point of decentralisation as a process of authority, from pushing power "top to bottom" in order for the public to have an influence on the management of natural resources.
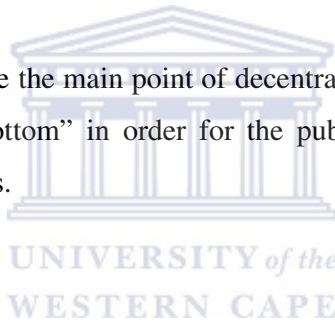
### 2.6.2. The purpose of decentralisation in water management

Most of the decentralisation literature indicates that decentralisation occurs during the transformation, or institutional reform. Saleth and Dinar (2000) indicated that "The water sector in South Africa is undergoing radical changes as part of the ongoing process of post-apartheid economic and political reconstruction, and these changes have led to a completely new system of water rights and concessions". The institutional transformation in South Africa, resulting in the process of decentralisation through the establishment of new institutions such as catchment management agency, water users association and catchment forums. "Decentralization of water management which functions through the establishment of catchment management agencies and water users associations is one of the progressive changes brought about by the NWA" (Backeberg, 2005). However, it cannot be ignored that decentralisation in the water sector is still challenging, as South Africa has been experiencing a range of challenges in implementing the South African Water Act No 36 of 1998.

Another matter raised by Saletha and Dinar (2000) was that decentralisation in the urban water sector occurs in the form of creating autonomous and financially self-dependent utility-type organisations for the provision of urban water services. This can result in those who have gaining more access to water than those who are poor. On the other hand Van der Zaag (2005) indicated that "the new decentralised water management bodies may, from time to time, be overruled by their parent ministry or basin commission precisely because of the need for integration and consistency. Sometimes the principle of subsidiarity implies that decisions should be made at the highest possible levels".

The purpose of decentralisation has resulted in improvements in human development outputs and has, therefore, been largely a matter of the resources and systems for allocating funding, primarily by central governments (Crook, 2003). Decentralisation also involves privatisation. The idea of power reaching the lowest level has placed a clear accent on decentralisation and privatisation initiatives, especially in the urban water sector. Although a wide variety of decentralisation and privatisation strategies have been implemented over the past dozen years, Wilder and Lankao (2006) argued that decentralisation has not yet uniformly yielded either efficiency gains or environmental benefits as anticipated, although in some local contexts there have been limited improvements. Saleth and Dinar (2000) indicate that decentralisation and privatisation programmes (in urban water supply) also need to be packaged well within the overall reform strategy.

"Decentralisation is aiming at effective management through a fine-tuning of information: more relevant details can be observed at a lower level, closer to the end-user. Further, direct stakeholder participation can be facilitated better in a system of decentralised decision-making. Decentralisation is also meant to bring decision-making closer to where the decision is applied. It is considered a more democratic process, and it normally fosters a considerable increase in transparency" (Jaspers 2003).

From what is said above about decentralisation, Diana (1995) indicates the message to the supporters of decentralisation by indicating the purpose of decentralisation; "To its supporters, decentralisation puts decision-making in the hands of people who are well-

informed, accessible to others, and in a position to make decisions, which are fundamental to the lives of many rural people, in a timely manner".

Decentralisation means that all interested stakeholders are part of decision-making on water issues. The triggers for change towards decentralisation are as follows: the need for integrated water management within hydrological boundaries; the added value of functional decentralisation enabling decision-making at the lowest appropriate level; stakeholder participation in decision-making and water resources planning; and cost recovery and water pricing (Jaspers 2003). Mtisi and Nicol (2003) believed that in Zimbabwe decentralisation occurred under the integrated water resource management paradigm, and shifted the focal point to Catchment and Sub-Catchment Councils. This is an indication that Integrated Water Resources Management (IWRM) is encouraging decentralisation of environmental and water resources management.

Lemos (2004) highlighted that democratic decentralisation advocates a push of central governments to design and adopt new institutional arrangements that effectively move the centre of decision-making to the local level, where they believe public participation, transparency and accountability will improve the management of natural resources as well as the livelihoods of local stakeholders. Wilder and Lankao (2006) agree, and state that "it is argued that decentralization allows for a more efficient provision of service by local authorities, private companies and water users, and for a more efficient and equitable allocation and use of the resource as well". According to Bruns (2003) decentralisation is one of the good governance principles, together with others such as transparency, accountability and participation, all of which are now widely incorporated into the policies of governments and international development agencies.

### 2.6.3. Decentralisation for decision-making in water management
Devolved decision-making mechanisms can facilitate the active participation of communities, articulating local priorities, and helping to ensure that programmes are appropriate to local needs (Francis and James 2003).

Decision-making is also a crucial part of decentralisation during the process of reform. Water management decision-making moved from the federal, state, and municipal levels to the river

basin, initiating a period of great activity and experimentation whose variations across the country provide a unique opportunity for the study of decentralisation and participation in natural resources management (Lemos 2004).

The above indication of reforms and decision-making is supported by Bruns (2003), in that reforms can open up decision-making, sharing of information, soliciting public input, involving stakeholders in discussion, and engaging them in working groups and other bodies that formulate recommendations regarding new policies and procedures. Increased public participation may also improve the democratic process by involving people in decision-making processes (Jonsson 2005).

Advantages of public participation, according to Jonsson (2005), is increased public awareness; better use of knowledge and experiences from different stakeholders; increased public acceptance through more transparent decision-making processes; reduced litigation, delays and inefficiencies in implementation; and a more effective learning process among the public, governments, and experts. Stave (2002) concurs with Jonsson that involving the public in decision-making helps prevent public obstruction of decisions and garners public resources for their implementation.

The main purpose of decision-making and decentralisation is increasing public participation in water issues. It calls for community-based decision-making, and decentralisation must be reconciled with what encompasses the local community of interest (Cortner and Moote 1994). Decentralisation calls explicitly for ''consensus'' in ''self-designed process'' involving ''all parties with a significant interest'', as the prescription for improved decision-making (McDaniels et al. 1999).

The belief that 'greater participation in public decision-making is a positive good in itself or that it can improve efficiency, equity, development, and resource management', all supports decentralised governance (Brannstrom 2004). Lemos (2004) indicated the better way of achieving the process of decentralising decision-making to the lowest level, in order to achieve better natural resource management and improved participatory policymaking. One favoured approach has been the creation of decentralised decision-making bodies, such as river basin councils, which incorporate public and private stakeholders in their decision-

making. Decision-making and decentralisation allow all stakeholders to participate, in respecting one another's opinions, to help rational decision-making (Policansky 1998). Increasing use of water is forcing reconsideration and modification of state water law. It seems desirable, therefore, to review state water doctrine from the standpoint of its effects upon the allocation process, particularly in regard to the question of centralised versus private decision-making (Milliman 1959).

As international waterways are increasingly developed to help make up growing water deficits, political aspects of a particular basin will take on greater importance in the process of water resources decision-making and planning (Wolf and Murakami 1995). If the gains from decentralised decision-making and community participation are to materialise, a further requirement is that, in decentralising state organs, they should not be allowed to abandon their ultimate responsibility for natural resource policy (Meynen and Doornbos 2004).

Since water, plants, animals, pollutants, and people, are in large part oblivious to administrative boundaries and cross them at will, ecosystem management combined with decentralised and fragmented decision-making structures will intensify the need for coordination among land and water management agencies at all levels of government (Cortner and Moote 1994). Group decision-making is becoming increasingly important in natural resource management and associated scientific applications. Because multiple values are treated coincidentally in time and space, multiple resource specialists are needed, and multiple stakeholders must be included in the decision process (Schmoldt and Peterson 2000). According to Lynam et al. (2007) natural resource decision-making requires a process to reconcile multiple actors.

### 2.6.4. Success and failure of decentralisation

Decentralisation seems to be implemented in different countries. The process of incorporating those who are at the lowest level to be able to participate in water management issues seems to be similar. Since decentralisation is a common trend in different countries, there might be lessons learnt from successes or failures of decentralisation in some countries that conducted the process.

"In Brazil, the state pursues decentralisation by transferring powers of management and decision-making over defined policy areas to lower levels of government, such as municipal councils, or to stakeholder committees. The challenge of democratic decentralisation in Brazil and elsewhere is how to incorporate polemic water-related issues into decentralised groups, while attracting activist networks and their considerable environmental knowledge" (Brannstrom et al 2004).

Like South Africa, Brazil has institutions that keep the process of decentralisations in water management operating, as Brannstrom et al. (2004) highlighted that decentralisation of Brazil's water resources management has been ongoing for several years. Federal water law envisioned governance at three geographical scales. A national council would oversee a national water agency and state water councils, while state-level bureaucracies would supervise catchment-level committees and agencies.

"The major reform challenge of South Africa lies in translating the provisions of its water law and water policy without creating much uncertainty among private investors" (Saleth and Dinar 2000). This is emphasised by Galvin and Habib (2003) when they write, "This legislative commitment to decentralisation is not endorsed by all. DWAF officials at a national level, for instance, are reluctant to hand over the reins to local government. This reluctance can be explained by two factors. First, although there is a transfer policy for personnel, the changing role of DWAF means that the jobs of individuals are insecure. Second, DWAF officials have invested enormous energies and resources over the last few years to get systems going, and they want to be confident that these will be maintained by local government".

Ribot (2003) highlighted an example of decentralisation from Mali, where the "farmers perceive decentralisation as a threat that may take their existing power to control resources out of their hands and give it to the commune [the new elected local governments]. But, this fear may have a positive effect on local governance, since the village is likely to play an active role in commune politics in order to retain control of decisions made about resources".

There are two principal components of decentralisation within Mexican water reform, namely, the ''transfer'' of irrigation districts to management by water users, and the

"privatization and decentralized" management of urban water systems. It is arguable that, rather than resulting in a clear success or failure, decentralisation in the Mexican water sector has been a context-specific process marked by limited benefits and multiple paradoxes (Wilder and Lankao 2006).

There are many reasons, indicated by Francis and James (2003), in the process of decentralisation in Uganda. Of the many reasons they highlighted only two will be discussed here. Firstly, the failure to remit tax yields back to local level, and the predisposition of politicians to sanction the non-payment of graduated personal tax (GT) during political campaigns, conspire to reduce local revenue still further. Secondly the transaction costs incurred by the multilayered pyramid of planning are high in terms of both time and their consumption of revenue for allowances. Yet the decisions which are the product of this system often fail either to reflect the priorities of lower levels or to enhance the flow of information downward to communities in ways which would enable them to hold their representatives accountable.

In the case of Ceara's in Brazil water reform was unquestionable, and all this was prompted by years of perceived crisis within the state's water management system. Their choice of a model was certainly shaped by a package of widely diffused policy prescriptions for ''good governance''. Good governance is the one whose proponents maintain that decentralisation, public participation, and shared governance can improve not only policy outcome through more efficient water management but also policy process through practices such as transparency, accountability, and democratic decision-making (Lemos, 2004). While federal-to-state decentralisation has undoubtedly advanced substantially, the process of devolving authority and responsibility from the state to local levels is less easy to characterise in terms of success or failure (Forminga-Johnsson and Kemper 2008).

In connection with the process of decentralisation in Mexico, Wilder and Lankao (2006) argued that, rather than resulting in a clear success or failure, decentralisation in the Mexican water sector has been a context-specific process marked by limited benefits and multiple paradoxes. They also emphasise the point when they argue that decentralisation has not yet uniformly yielded either efficiency gains or environmental benefits as anticipated, although in some local contexts there have been limited improvements. Perhaps the greatest paradox in

Mexico's water reform program is the need to achieve a more appropriate balance between decentralised institutions with strong public participation on the one hand and, at the same time, to sustain institutional capacity and resources to carry out the programmes designed by those new institutions. Evidence presented in these case studies from Mexico's rapidly growing urban centres and dynamic agricultural regions indicates that the country's decentralisation experience has resulted in highly context-specific outcomes that are often paradoxical in nature (Wilder and Lankao 2006).

# CHAPTER 3
# RESEARCH METHODOLOGY

## 3.1. Conceptual Framework

Public participation has been viewed as displaying different degrees of influence on decision-making by those participating. Many authors, such as Arnstein (1969); Bruns (2003); Chouill (1996); Berkes (1994); Connor (1988); and the International Association for Public Participation (AIP2), identify a number of levels of participation. These levels vary in number of levels and in the way they are listed. There are, however, also commonalities that appear in all authors' lists of levels of participation. Using the concept of the different levels of participation, a theoretical framework is created that guides the analysis of public participation processes, and allows us to make judgments as to the influence of a particular public participation process on decision-making.

When analysing public participation processes in terms of the 'ladder of participation', there should be sufficient levels to distinguish different degrees of decision-making. However, one should avoid so many levels that it becomes too difficult to discriminate between different levels. To this end, the frameworks of Arnstein (1969) and others (Bruns, 2003; Chouill, 1996; Berkes, 1994; Connor, 1988) have too many levels. For the purposes of this study the levels, as identified by the International Association of Public Participation (IAP[2]), seem an appropriate theoretical and analytical framework (see table 1 on the next page).

Du Toit and Pollard (2008) first used the Spectrum of Public Participation to "select the appropriate level of participation for a particular task" (p. 709). They interpret the spectrum to be five types of participation, and state that different water management tasks require a type of participation appropriate for that task. According to Du Toit and Pollard (2008), setting the reserve, for example, is a task that requires the public to be only informed. Informing the public is thus regarded as appropriate participation. In Du Toit and Pollard's interpretation of the Public Participation Spectrum, some tasks could require participation at the level of inform, others at the level of involve, etc. This study has a different interpretation of the utility of the Public Participation Spectrum to that of Du Toit and Pollard. In this study the spectrum represents a measure of the public participation process, where participation at the level of empowerment is preferable to participation at the level of collaboration, which in turn is preferable to participation at the level of involvement, etc. A public process at the

level of involve is therefore more robust and more inclusive than one at the level of consult. This interpretation also suggests that it is possible to engage in a public participation process at the higher level (consult, for example) without meeting the requisite action at the lower level (inform, in the example). When this happens, the public participation process could be regarded as being flawed.

| Increasing the Level of Public Impact | | | | | |
|---|---|---|---|---|---|
| | **Inform** | **Consult** | **Involve** | **Collaborate** | **Empower** |
| Public participation goal: | To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities, and/or solutions. | To obtain feedback on analysis, alternatives, and/or decisions. | To work directly with the public throughout the process to ensure that public concerns are consistently understood and considered. | To partner with the public in each aspect of the decision, including the development of alternatives and the identification of the preferred solution. | To place final decision-making in the hands of the public. |
| Promise to the public: | We will keep you informed. | We will keep you informed, listen to and acknowledge concerns and aspirations, and provide feedback on how public input influenced the decision. | We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed, and provide feedback on how public input influenced the decision. | We will look to you for advice and innovation in formulating solutions, and incorporate your advice and recommendations into the decisions to the maximum extent possible. | We will implement what you decide. |
| Example techniques | • Fact sheets<br>• Web sites<br>• Open houses | • Public comment<br>• Focus groups<br>• Surveys<br>• Public meetings | • Workshops<br>• Deliberative polling | • Citizen advisory committees<br>• Consensus-building<br>• Participatory decision-making | • Citizen juries<br>• Ballots<br>• Delegated decisions |

Table 2: Levels of participation according to the International Association of Public Participation

To write the proposal to establish a CMA in the different water management areas, the DWAF created a Reference Group as a public participation platform. Reference Group

meetings were the principle vehicle used by DWAF to involve stakeholders in the process of establishing Catchment Management Agencies. All interested and affected parties were invited to participate in the deliberations of the Reference Group.

### 3.2. The study area

The study area is the Olifants-Doorn Water Management Area. The public participation process was where the Department of Water Affairs embarked on the writing of a proposal to establish a catchment management agency for the Olifants-Doorn Water Management Area. In addition to bringing a range of existing and traditional stakeholders together, DWAF also established eleven catchment forums in the WMA to give further opportunity for people to participate in the process in an organised manner. The map below depicts the location of the Olifants-Doorn WMA (figure 1) in South Africa.

Figure 1: Map of South Africa showing the nineteen Water Management Areas
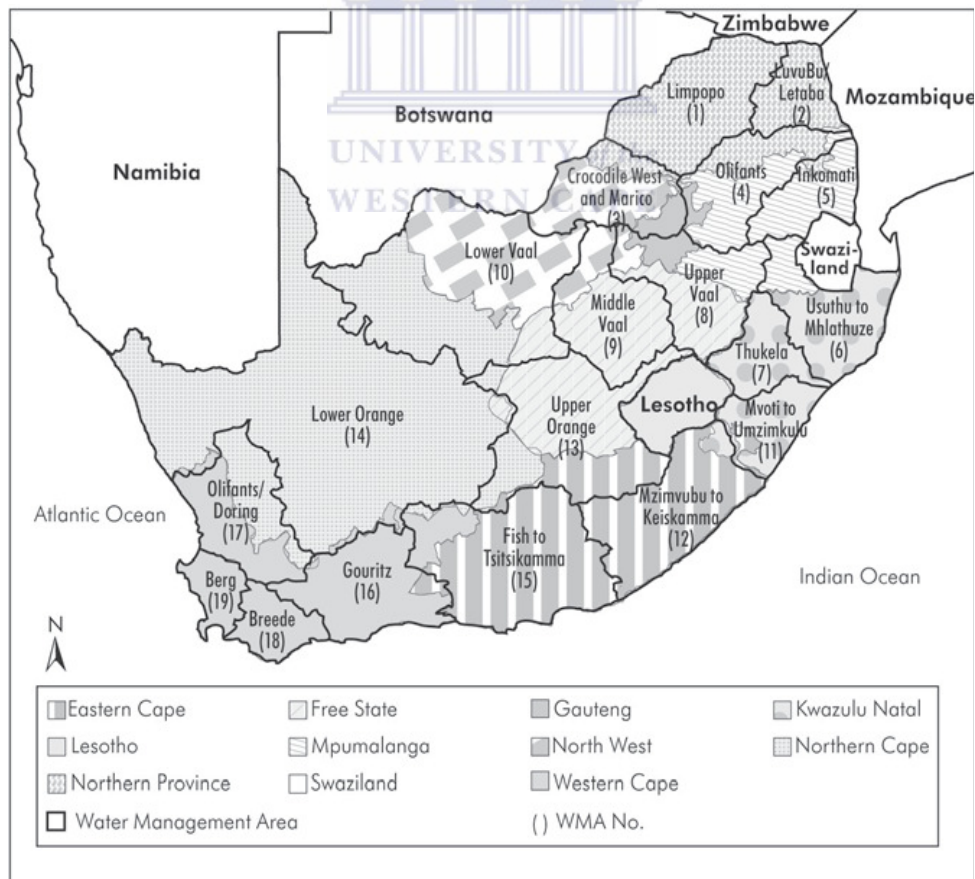


(Müller and Enright 2009)

The interested and affected parties in the Olifants-Doorn Management Area included stakeholders from agriculture (Agri-Western Cape, Agri-Northern Cape, Citrusdal Farmers Association, Clanwilliam Farmers Association, Loeriesfontein Farmers Association, Lutzville Farmers Association, Van Rhynsdorp Farmers Association, Vredendal Farmers Association, Witzenberg Farmers Association), business and government departments other than DWAF (Matzikama Municipality, Cederberg Municipality, Western Cape District Municipality; Department of Agriculture, Department of Land Affairs, Department of Housing, Department of Health) and catchment forums (Witzenberg Forum, Lower Olifants Forum, Upper Olifants Forum, Middle Olifants Forum, Ceres Karoo Forum, Koue Bokkeveld Forum, South Namakwaland Forum, Nama-Karoo Forum, Ceder-Doorn Forum, Hantam Forum, and Sandveld Forum).

### 3.3. Data sources and analysis

As Reference Group meetings were the main vehicle used by the Department of Water Affairs and Forestry to involve stakeholders in the process of establishing Catchment Management Agencies, minutes from the meetings of the Reference Group in the Olifants-Doorn Water Management were therefore the primary source of data. Of the total of nineteen meetings the minutes of ten meetings were available. Additional data sources were approved proposals and field notes. Consultants who facilitated the public participation process were consulted from time to time to verify information.

The documents were scrutinised for evidence of activities that show that the stakeholders were informed by the Department of Water Affairs and Forestry; that the stakeholders were consulted by the Department of Water Affairs and Forestry; that the stakeholders were involved as well as collaborated in the writing of the proposal to establish the catchment management agency in the Olifants-Doorn water management area. Finally, evidence that points to the fact that the stakeholders were empowered was sought. The public participation goals, as well as the promises described in the Public Participation Spectrum table, directed the decisions on what was relevant evidence. For inform, "the promise to the public is: 'we will keep you informed'". For consult, "the promise to the public is: 'we will keep you informed, listen to and acknowledge concerns, and provide feedback on how public input influenced the decision'". For involve, "the promise to the public is: 'we will work with you to ensure that your issues and concerns are directly reflected in the alternatives developed,

and provide feedback on how public input influenced the decision'". For collaborate, "the promise to the public is: 'we will look to you for direct advice and innovation in formulating solutions, and incorporate your advice and recommendations into the decision to the maximum extent possible'". For empower, "the promise to the public is: 'we will implement what you decide'".

## CHAPTER 4
## Results and discussion

### 4.1. Introduction

In chapter one and two, water governance including reforms in South Africa were indicated. "Water governance is concerned with those political, social and economic organisations and institutions (and their relationships), which are important for water development and management" (GWP 2000). The purpose of institutional reforms in South Africa was to addressing the challenges of post-1994 based on inequalities to access to safe water and sanitation. By reforming institutions is to change the process that was causing the above mentioned in order to get better services and sustainable management. In order for this to be successful it will be done through good water governance, where water issues will reach the lowest appropriate level. Thus this allows forums and other stakeholders to have an influence on water management issues based on their catchment management areas. "Prior to 1994, public policy in South Africa was exercised within a system of minority rule or what can be called a "limited majoritarian democracy". In South Africa, all changes in water policy between 1984 and 1994 have occurred in the context of the absolute power of parliament" (Backeberg 2005). As also noted on chapter one that catchment forums were played a role of being a vehicle for public participation in the establishment of catchment management agency in order to improve good water governance.

In 1992, Dublin was the setting for the International Conference on Water and the Environment. The conference came up with the following four key principles:

1. Freshwater 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;
4. Water has an economic value in all its competing uses, and should be recognised as an economic good (Dublin 1992).

The main purpose of these principles was to balance the needs of human beings and the environment. Principle 2 focuses on public participation in the Dublin principles: *Water development and management should be based on a participatory approach, involving users, planners and policy-makers at all levels.* This is the indication of integrated water resources management, when different interested stakeholders gathered together to come out with mutual ways of managing water through the decision-making process. Thus water development and management need different multi-stakeholders from various fields to engage in water issues. The Dublin Conference was a crucial platform for participation, where different international stakeholders discussed various principles that can assist in ways of management, protection, use and sustainability between water and environment. Public participation was central to achieving this. Public participation is seen as a cornerstone of water development and management, where all parties must be part of the process.

In South Africa the Department of Water affairs and Forestry used a Reference Group as the public participation platform to bring stakeholders within a Water Management Area together to deliberate on and formulate a proposal for the establishment of a Catchment Management Agency. In the same manner as the International Conference on Water and the Environment provided a platform for international stakeholders, the Reference Group provided a platform for stakeholders to participate in the establishment of catchment management agencies.

For the officials of the Department of Water Affairs and Forestry, public participation was not something they could decide whether to have or not have. Public participation was built into the system since the very beginning of the water reform process in South Africa. It was presented in a departmental document entitled Fundamental Principles and Objectives for a New Water Law in South Africa. Principle 23 states: "Responsibility for the development, apportionment and management of available water resources shall, where possible and appropriate, be delegated to a catchment or regional level in such a manner as to enable the public to participate" (DWAF, 1997).

The promulgation of the National Water Act (Act No. 36 of 1998) confirmed the process of fundamental change in the way in which water resources are managed in South Africa. One of the key aspects of this process is the establishment of new water management institutions that will allow water users and other interest groups to participate in the management of their

water resources. The most significant of these institutions is the Catchment Management Agency.

The National Water Act makes provision for the creation of Catchment Management Agencies to manage the water resources within specific Water Management Areas. As custodian of the nation's water resources, the Minister of Water Affairs and Forestry, through the Department of Water Affairs and Forestry, has divided South Africa into 19 Water Management Areas (WMAs). The goal is the holistic and sustainable management of South Africa's water resources through an institutional framework of integrated water resources management (DWAF 2005).

The purpose of establishing the catchment management agency is to delegate water resource management to the regional or catchment level and to involve local communities, within the framework of the national water resource strategy. According to the National Policy (1997), the vision around public participation is subjected and planned as follows: the governance structure of CMAs will balance the requirement to reflect the interests of various stakeholders with the need to ensure the effective management of the catchment area. This is highlighted under the initial functions of Catchment Management Agencies in the National Water Act. The last function (e) states that one of the functions of Catchment Management Agencies is to promote community participation in the protection, use, development, conservation, management, and control of the water resources in its water management area.

The National Water Act (1998) states that the minister must develop a national water resource strategy. "The national water resource strategy provides the framework for protection, use, development, conservation, management and control of water for the country as a whole" (NWA, Chapter 2, Part 1). It provides the context and the framework for the decentralisation of water resources management.

In addition to the statutory organisations that have public participation as part of their functions, the Department of Water Affairs and Forestry (DWAF) created Catchment Forums to facilitate and enhance public participation during the establishment of Catchment Management Agencies.

The Reference Group meetings were used to debate and prepare the proposal for the establishment of Catchment Management Agencies. The proposal must be sent to the Minister for approval before a Catchment Management Agency can be established. One of the aspects that the Minister will consider before approving the establishment of a Catchment Management Agency is the nature and extent of the public participation process. The Catchment Forums are expected to provide a space where the voice of the marginalised can be heard. Usually marginalised groups do not have access to stakeholder organisations, and are thus represented by Catchment Forums. The rationale for involving different stakeholder organisations in the establishment process is the notion that using public participation in order to build the Catchment Management Agency, with mutual agreement among the stakeholders, will lead to wider acceptance of the agency.

## 4.2. Generic guidelines for managing the public participation process

The Department of Water Affairs and Forestry compiled generic guidelines for the public participation process. These generic public participation guidelines offer assistance to Department of Water Affairs and Forestry (DWAF) officials in understanding public participation as an aid to decision-making. They also aim to assist the Department in applying public participation within the scope of DWAF's activities. The guidelines are not intended to dictate or prescribe the public participation process, but rather to provide ideas on how to undertake public participation (DWAF 2001).

According to DWAF (2001), the quality of life can be improved by making sure that the community is part of the decision-making. This can lead to collaboration among the stakeholders, other interested parties, and the Department of Water Affairs and Forestry. This highlights the principle of "rights and roles". This principle states that both government and civil society should take a pro-active role in creating an environment in which public participation contributes to the right of all individuals to be part of the decisions that influence their quality of life. The two objectives that would indicate a culmination in the improvement of people's quality of life are the improvement of decision-making and sustainable development through public participation. The Department of Water Affairs and Forestry produced sixteen principles that strengthen public participation, namely, inclusivity; integration; mutual respect; continuity; multiple options; flexibility; transparency; rights and roles; accountability and commitment; accessibility of information; awareness creation;

capacity building and empowerment; efficiency; suitability; feedback to and from stakeholders, and monitoring and evaluation. These principles are meant to give guidance to those involved in public participation. Under the generic process there are three phases that broadly cover a public participation process. These phases are based on the assumption that no comprehensive recipe for public participation exists (DWAF 2001).

The three phases of participation are the planning, the participation, and the exit phase. The *planning* phase includes three steps: decision analysis, participation planning, and implementation planning. The *participation* phase includes four steps: informing stakeholders, meeting with stakeholders, feedback to and from stakeholders, and monitoring and evaluation. The *exit* phase includes two steps: ensuring that all goals have been reached, and officially bringing the public participation process to a clear and definite end. The Department of Water Affairs and Forestry believes that public participation can contribute to the success of its initiative as well as the accomplishment of sustainable development. The generic guidelines assist in rectifying the inequities of the past by offering all stakeholders the opportunity to be involved in decisions that affect their lives (DWAF 2001).

Public participation was regarded by the Department of Water Affairs and Forestry as very crucial for the establishment of the catchment management agencies. The manifestation at this point is that all the proposals for the establishment of catchment management agencies submitted to the minister highlighted the public participation process (DWAF, 1998, 1999). During the process of writing the proposals to establish the catchment management agencies, a public participation process took place in which interested groups, stakeholders and water users took part. Included in the proposal was a description of how stakeholders were mobilised, and how stakeholders remained involved in the preparation of the proposals. That public participation is a priority for the Department of Water Affairs and Forestry is illustrated by the generic guidelines for public participation. These provide ideas on how to undertake public participation, and how to ensure that the public participation process is consistent throughout the nineteen Water Management Areas.

### 4.3. Catchment Forums in the Olifants-Doorn
#### Description of Olifants-Doorn WMA 17

The Olifants-Doorn Water Management Area has been proclaimed in Government Notice No. 20491, dated 1 October 1999, as Water Management Area No. 17. It lies on the West

Coast of South Africa and spreads across two provincial jurisdictions, namely the Western Cape and the Northern Cape Provinces. The Olifants-Doorn Catchment is generally arid, with an average rainfall of less than 300 mm/a. The Olifants River is the only river in the catchment, of which the Doring River is the main tributary. The major part (90 percent) of water use is for irrigation in the summer months (DWAF 2004).

It is largely a winter rainfall region, with the Southern region of the catchment receiving up to 1 500 mm rainfall in the mountains, while the Northern region experiences near-desert conditions with less than 100 mm rainfall. The temperature across the catchment varies from very hot during the summer days, with the town of Calvinia experiencing some of the hottest temperatures found anywhere in South Africa, to cold during winter months (DWAF 2004).

Figure 2: Olifants-Doorn WMA indicating location of catchment forums



Source: DWAF 2004

The formal process of establishing catchment forums started in February, 2001. A number of public meetings were held which involved a wide range of interested and affected parties. The aims of these public meetings were to focus on the following matters:

- Inform the public about the Catchment Management Agency establishment process;

- Identify individuals, stakeholders, and interested and affected parties in the Catchment Management Agency establishment process;

- Identify individuals, stakeholders, and interested and affected parties who would be willing to serve on Catchment Forums (one committee for each quaternary drainage area).

These meetings played a role in the establishment of the eleven catchment forums in the Olifants-Doorn water management agency. The forums were established based on their geographical areas, as the above map shows. After information meetings were held, the Catchment Forums were formally constituted during 2002, with each forum electing a chairperson and vice-chairperson. For the purpose of capacity building, the vice-chairpersons were generally chosen from the previously disadvantaged groups.

An action plan has been drawn up for each forum area, which includes the frequency of meetings to be held. The meetings are to be held from once every three months to twice per year, depending on the issues and needs of the area. All issues of particular concern and recommendations from the forums will be raised by forum representatives at the Reference Group meeting. In the Reference Group meetings participants are reminded that the objective is to bring Water Resource Management to community level for everyone to understand and participate in.

### 4.4. Public participation through Catchment Forums

### 4.4.1. Participation requires all parties to be informed:
The key issue in the public participation goal is information dissemination. The Department of Water Affairs and Forestry disseminates information in different ways.

The first and probably most important way of information dissemination is through documents compiled by the Department of Water Affairs and Forestry. These documents are

distributed by the public participation consultant before every meeting to every catchment forum member, and contain information about the issues that are to be discussed at the next meeting. One such issue was the proposal to establish the catchment management agency. Chapter 2 of the proposal, for example, described the public participation process conducted in the water management area. A copy of Chapter 2 was sent to all the stakeholders, to be studied before the Reference Group meeting. All the stakeholders were thus informed, and had time to become acquainted with the content of the document. Other chapters were distributed before the meetings where they were discussed.

The second way in which the Department kept the stakeholders informed was through sharing information at the Reference Group meetings. For example, at the Reference Group meeting on 07 February, 2008, the Department used the opportunity to give feedback on important projects that were taking place in the Olifants-Doorn Water Management Area (for example, the DANIDA project; capacity building programmes; the role of the national project steering committee; developmental project cycle management; potential micro projects; Clanwilliam wetlands projects; Clanwilliam water awareness project). Another example of the transparency of the Department of Water Affairs and Forestry was the use of the meetings to inform the stakeholders about what is happening inside the Department, such as staff turnover.

A third way in which the Department keeps the stakeholders informed is through educational fact sheets, newsletters, media coverage in the form of press releases and advertisements, as well as radio announcements and talk shows. A special emphasis is placed on the use of local media.

From the above examples it seems clear that the Department of Water Affairs and Forestry has achieved the public participation goal of keeping the stakeholders informed.

### 4.4.2. Participation requires all parties to be consulted
The key issue with the public participation goal of consultation is that the Department of Water Affairs and Forestry creates space where the representatives of the Catchment Forums (and other stakeholders) have a voice to express their views and concerns. For the catchment

forums to have a voice, their representatives must be present at the meetings. The chart below shows the level of attendance amongst Catchment Forums.
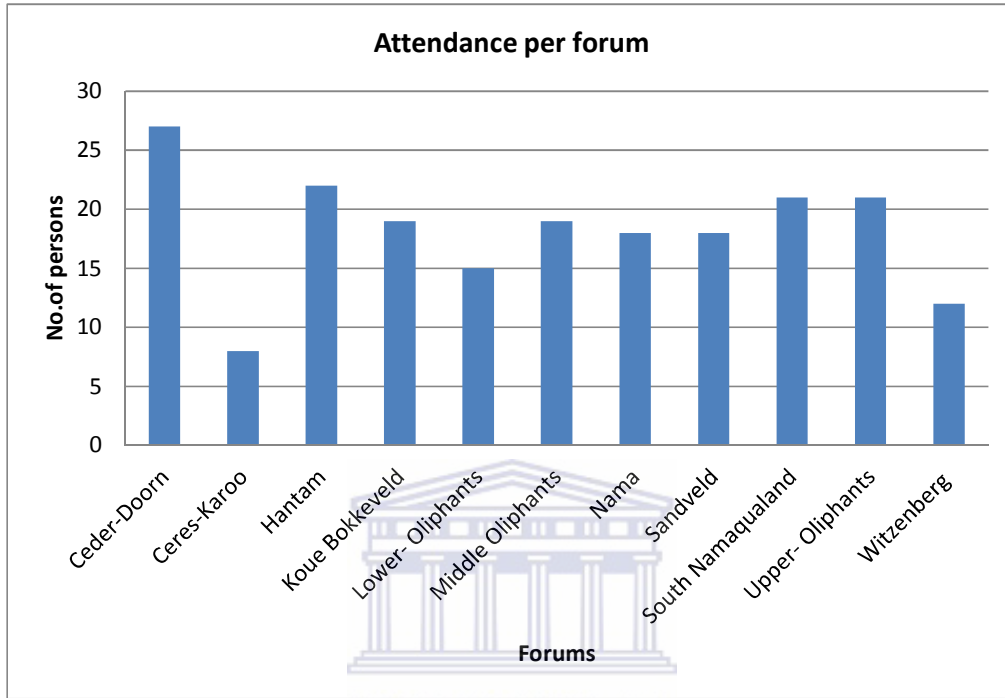


Chart 1: the attendance at meetings by representatives from the catchment forums.

Out of the 19 meetings that were held in Olifants-Doorn water management area during the writing of the proposal to establish the catchment management agency, the attendance registers of only ten meetings were available. Three forums (Koue Bokkeveld, South Namaqualand and Upper Oliphants) attended all ten meetings, for which the attendance registers were available. Four forums (Hantam, Lower Oliphants, Middle Oliphants, and Nama) were absent from one meeting. Ceder-Doorn forum was absent from two meetings, whilst Witzenberg was absent from three meetings, and Ceres-Karoo forum was absent from five meetings. Most of the forums had at least one person present at each meeting, and often more than one. The level of attendance fluctuated, as indicated by the total attendance at the different meetings in chart 2 below.

**Meeting date vs Attendance**
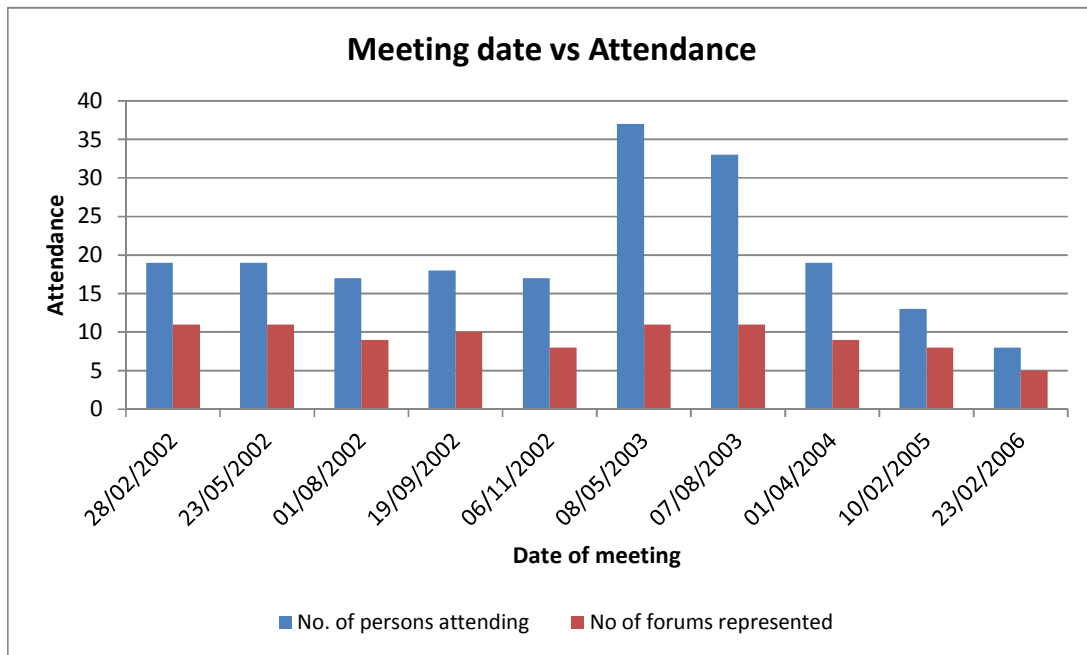
Chart 2: Attendance at meetings by forum representatives, and total number of persons

The meeting of the 23rd of February 2006 was attended by eight representatives from five forums. Based on the attendance register, this was the lowest number of representatives at any meeting. Only 49 representatives were present.  This low attendance could possibly be ascribed to the fact that the proposal had been completed in July 2005, and the principle incentive for attending these meetings was thus absent. On the other hand, most people attended the meetings of 8th May and 7th August, 2003. The total number of representatives of the forums was 37 on the 8th of May and 33 on the 7th of August. The attendance of the forums at those two meetings was consistent with the attendance of all stakeholders, 132 of the other stakeholders on the 7th of August and 137 on the 8th of May, a higher attendance than at any other meetings where the attendance register was available. The high attendance at these meetings could be because the proposal to establish a Catchment Management Agency was approved at the meeting of the 8th of May. Two representatives from the reference group were going to be elected to serve on the Catchment Management Agency Advisory Committee.

Although the attendance of the forum representatives fluctuated, overall it was sufficient to allow for giving feedback at the Reference Group meetings.  Four forum members had to

47

present, giving feedback at the Reference Group meetings. However, they also needed to have their voices heard. As mentioned above, the forums in Olifants-Doorn participated in writing the proposal to establish the catchment management agency. The process of writing the proposal served as vehicle for public participation. Earlier it was shown that the forums attended the meetings; however, it remains to be seen that some forums used the opportunity whether these representatives by voiced up their opinions and gave feedback.

The chart below shows the extent to which the forums participated in the meetings. A table was compiled with the dates of the meetings in the rows, and the forums in the columns. The cells contained the number of times the forum representatives contributed to the debates. The graph shows the number of times the forum voices were heard, and the number of meetings in which the forum members spoke.
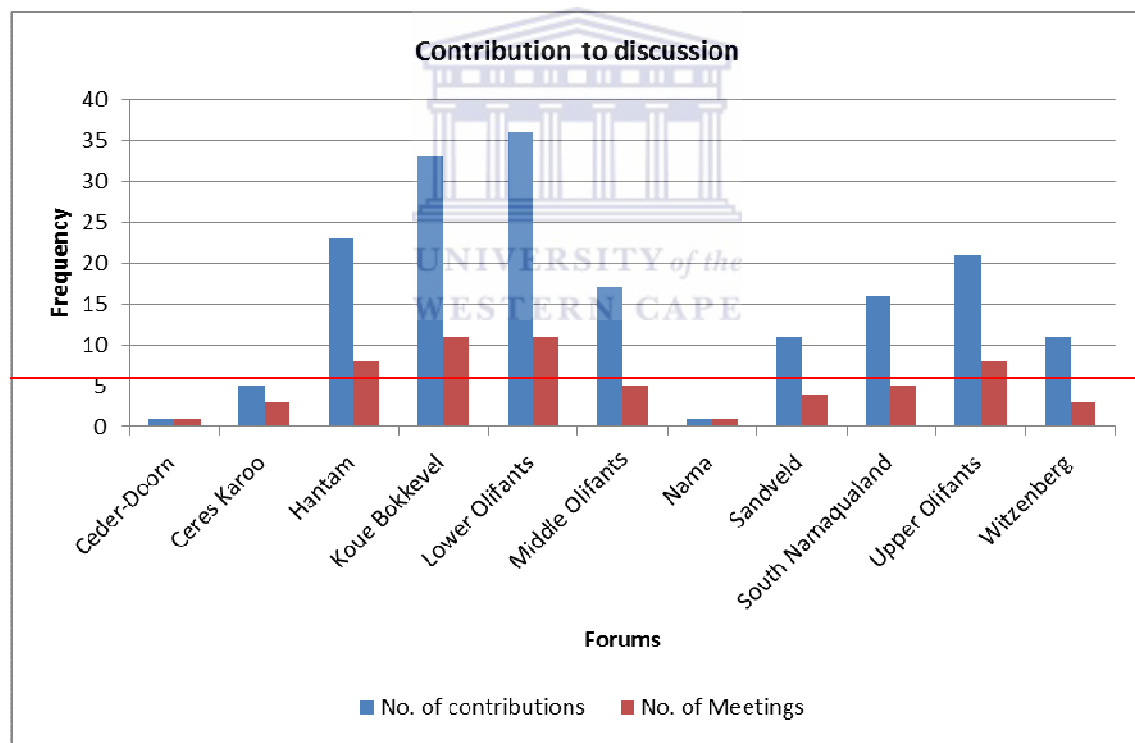


Chart 3: Contributions to the discussions by the forum representatives

The extent to which the various forums used the opportunities to speak differed. The top three forums that used the opportunity to speak or put their views were the Lower Olifants-Doorn forum with a contribution on 36 occasions; the Koue Bokkevel forum with a contribution on

33 occasions; and the Hantam forum with a contribution on 24 occasions. The Ceder-Doorn forum and Nama forum spoke only once. To summarise, members from the Ceder-Doorn Forum spoke once in one meeting. Members from the Hantam Forum spoke 23 times in eight meetings. The most vocal forums seem to have been the Hantam, Koue Bokkeveld, Lower Olifants and Upper Olifants Forums. The Middle Olifants, Sandveld, South Namaqualand and Witzenberg were less vocal, and the Ceder-Doorn, Ceres-Karoo and Nama Forms were basically silent.

Although the Department of Water Affairs and Forestry created the opportunity for forum representatives to give feedback, the feedback from them was uneven. Possible reasons for this are:

(a) Some forum members might have felt that they could not contribute due to lack of capacity. Capacity building and awareness raising was an issue to which forums felt the department should pay attention.

(b) Someone insists (said something have said with which – meaning?) and therefore did not feel the need to repeat it.

(c) Writing the proposal to establish the Oliphants-Doorn Catchment Management Agency was not necessarily a priority for forum members, who wanted to discuss water issues that were of importance to them.

It is difficult to assess whether the Department of Water Affairs and Forestry succeeded in achieving the public participation goal of consult. By organising regular meetings of the Forums and Reference Group, the Department of Water Affairs and Forestry created the opportunity for forum members to give feedback on the issues raised. From this angle it was a success. However, by limiting the discussion to issues of the proposal to establish the catchment management agency, the department closed down some of the space. From this perspective it was less successful.

### 4.4.3 Participation requires all parties to be involved

The key issue with the public participation goal of involvement is that the Department of Water Affairs and Forestry deals directly with the stakeholders. This is in effect a promise to be accountable to the stakeholders. The public participation goal of involve is described in the Public Participation Spectrum as: 'to work directly with the public throughout the process

to ensure that public concerns are consistently understood and considered'. Mulgan (2000) lists the following features of accountability: "It is *external*, in that the account is given to some other person or body outside the person or body being held accountable; it involves *social interaction and exchange*, in that one side, that calling for account, seeks answers and rectification while the other side, that being held accountable, responds and accepts sanctions; it implies *rights of authority*, in that those calling for an account are asserting rights of superior authority over those who are accountable, including the right to demand answers and to impose sanctions". The accountability relationship between the Department of Water Affairs and Forestry and the catchment forums are presented below:

| Accountability feature | Department of Water Affairs and Forestry | Catchment Forums |
| --- | --- | --- |
| External | Body held accountable | Some other person or body |
| Social interaction and exchange | Responds | Seeks answers |
| Right of authority | Accepting the authority of the outside body | Asserting right of superior authority |

To achieve the public participation goal of involve, public participation goals of inform and consult must be achieved. Sections 4.4.1 and 4.4.2 show that these two goals were indeed achieved. However, achieving the goals of inform and consult does not mean the goal of involve is achieved automatically. To achieve the goal of involve the Department of Water Affairs and Forestry must respond to feedback given by catchment forum members. Chart 4 below illustrates the interaction and exchange between the Department of Water Affairs and Forestry and catchment forums.

**Interaction and exchange**
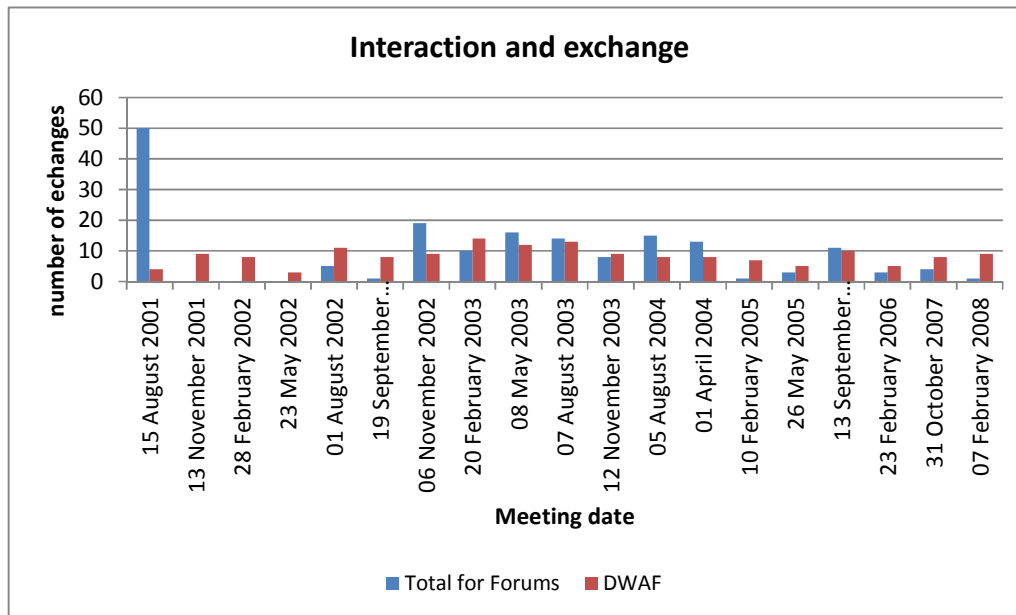
Chart 4: Interaction and exchange between the Department of Water Affairs and Forestry and catchment forums

There is an indication that the Department of Water Affairs and Forestry and the catchment forum were involved in the establishment of Catchment Management Agency. The establishment of the catchment management agency during the first meeting forums raised a number of issues important to them. These issues (capacity building and awareness creation, state of the resources, legal and institutional, participation, management, groundwater, available land, access and allocation, water quality and water supply) were used by the Department of Water Affairs and Forestry to create the context for the writing of the proposal to establish the catchment management agency. As shown in chart z, the department was the most vocal one in the next two meetings. During these meetings the department responded to the issues raised by the forum members, but also used these meetings to lay the groundwork for the discussion of the actual establishment proposal. The forums' silence in the next couple of meetings could have been because the Department of Water Affairs and Forestry informed them that the idea of participation was not to discuss issues of general concern to forum members, but to work with them to write the proposal to establish the catchment management agency.

### 4.4.4. Participation requires all parties to collaborate

The public participation goal of collaborate is described in the Public Participation Spectrum as "to partner with the public in each aspect of the decision, including the development of alternatives and the identification of the preferred solution**".** To partner implies that all parties to the partnership have the capability to contribute to the decisions, the development of alternatives, and the identification of solutions. Section 4.4.3 above indicated capacity building and awareness raising as issues raised by the catchment forums from the start. It seems that the catchment forum members were aware of the fact that for them to participate in the Reference Group meetings, they needed to be capacitated to do so. The Department of Water Affairs and Forestry listened to their concern and devised a number of capacity building activities that lasted over the period of the proposal writing process. The educational fact sheets, newsletters and radio talk programmes that were devised for information dissemination purposes also served as capacity building materials. The department also instituted catchment forum meetings just prior to the Reference Group meeting, where the agenda of the reference group meeting was discussed and issues clarified. To facilitate the functioning of the catchment forums, the department contributed to the salary of a secretary for each forum, to ease the administrative workload of the chairperson. The secretaries received training arranged by the department, and this increased their capacities. Finally, the department also made time available during the Reference Group meetings for the presentation of a range of technical topics. This was done throughout the duration of the process to write the proposal to establish the catchment management agency.

### 4.4.5. Participation requires all parties to be empowered

The public participation goal to be empowered is described as "to place final decision-making in the hands of the public". The question one must ask when evaluating the goal 'to be empowered' in the context of the catchment forums and the public participation process in the Olifants-Doorn Water Management Area is: Was there any occasion where the catchment forum members managed to dictate the decision that should be taken? The purpose of the catchment forums was to be the vehicle for public participation in the establishment of the catchment management agency. The catchment forums seem to have had no influence on decision-making. It appeared that their input in the Reference Group meetings was not as influential as it was supposed and expected to be. The reason for this conclusion is that in the first meeting, the Department of Water Affairs and Forestry gave instructions that the forums

must group themselves and raise their respective issues based on their geographical areas. Although the forums put those vital issues on the table, the issues that the Department of Water Affairs and Forestry took up throughout the nineteen meetings were those issues that the Department wanted to focus on in the Reference Group meetings, in order to complete the proposal to establish the Olifants-Doorn Catchment Management Agency.

Another example of the powerlessness of the forums to make the final decision was the manner in which the Department of Water Affairs and Forestry dealt with the final proposal to establish the catchment management agency. The final proposal that was to be submitted to the Minister for approval was discussed at a meeting on the 8th of May 2003. Thirty-seven people from eleven catchment forums attended the meeting, and the proposal was unanimously accepted by the Reference Group. The next Reference Group meeting was attended by thirty-three members from eleven forums. At this meeting, the advisory board to advise the minister on the composition of the Governing Board of the catchment management agency was selected. The Olifants-Doorn Catchment Management Agency was established in September 2006.  Although the Reference Group and thus the catchment forums were keen to have the catchment management agency operationalised, soon after gazetting the establishment of four catchment management agencies, the Minister of Water Affairs and Forestry (at the time Ms Hendricks) put a moratorium on the establishment and operationalisation of catchment management agencies.

### 4.4.6.    Summary and conclusions – the participatory nature of catchment forums

In its generic guidelines, the Department of Water Affairs and Forestry identified three phases of the public participation process, namely, planning, participation, and the exit phase. All the evidence points to the planning phase having been done very well, and the participation phase occurring without any difficulties.

It seems that the Department of Water Affairs and Forestry performed very well in keeping the forum members informed, using a number of different approaches. The response to the public participation goal consult was very good, in that the department created many opportunities for forum members to give feedback. The forum members, however, did not use the opportunities to give feedback consistently, fluctuating between being silent and vocal. This uneven use of opportunity cannot be blamed on the department. Although the

public participation goal of involve was achieved, the forum members were kept strictly to the agenda of writing the proposal to establish the Olifants-Doorn Catchment Management Agency. Although the forum members raised a significant number of issues, these were only entertained and allowed to be debated by the Department of Water Affairs and Forestry when the issue was directly related to the proposal to establish the catchment management agency.

Forums wanted to discuss issues that were important to them, but the Department of Water Affairs and Forestry insisted on narrowing down the substance of the Reference Group meeting to the catchment management agency proposal. The final decision about issues to be discussed remained with the department. On the public participation goal collaborate, the Department of Water Affairs and Forestry succeeded in establishing partnerships with the different forums and stakeholders and arranged activities that contributed to the capacity of forum members to be equal partners in the partnerships. The public participation goal of empower envisages passing the final decision to the stakeholders.

The department, however, did not succeed at leaving the final decision on the composition of the proposal to the forum members. This is understandable since it was a Water Affairs Department process in the first place, and it was the regional office of the department that initiated and facilitated the process. The regional office is ultimately accountable to the national office, and the decision of the national office to stop the process of establishing catchment management agencies is indicative of where the real power resides.

In chapter one, as from one of the Department of Water Affairs and Forestry documents, it is stated that "The role of catchment forums is narrowly defined in terms of being a vehicle for public participation to support the establishment of catchment management agencies". During the process of writing the proposal to establish the catchment management agency, it seemed that forum members wanted the catchment forums to have less of a facilitatory role, and to have more influence on the issues that were dealt with at the Reference Group meetings. Despite the fact that this desire of forum members was not met, the Department of Water Affairs and Forestry must be commended for its efforts in information dissemination, listening to feedback, accepting accountability to forum members, interacting with them on the issues, and positively contributing to the partnership by capacitating the forum members to be active partners.

**4.5. Public participation in the absence of Catchment Forums**

Were there forums in all the water management areas that submitted proposals for the establishment of catchment management agencies?

In the course of writing the proposal to establish the catchment management agency, the Department of Water Affairs and Forestry facilitated the establishment of catchment forums, and significant investment of resources in capacitating forum members to be active participants. However, representation at the Reference Group meetings included a host of other stakeholders. In the Olifants-Doorn Water Management Area 'other' stakeholders included, amongst others, national, provincial and local government departments; Traditional Authorities; parastatals, and the utility sector (Water Boards, Irrigation Boards, Conservation bodies, Universities and Technikons, and statutory organisations); private sector organisations such as large corporations, Chambers of Business/Industry/ Tourism; civil society organisations such as trade unions, non-governmental organisations, ratepayers associations, community-based organisations, commercial and small farmers associations, and water user associations. This left one wondering whether catchment forums were really needed for the process to establish catchment management agencies.

To determine whether catchment forums were really necessary to write the proposal to establish a catchment management agency, the nine successful proposals were analysed. Specific attention was paid to the chapter dealing with the description of the public participation that was followed during the public participation process.

**Table 3: The number of Catchment Forums and other stakeholders during the establishment of CMAs**

| Water Management Area | Forums | Other Stakeholders groups |
|---|---|---|
| Berg | 0 | 15 |
| Breede | 7 | 22 |
| Crocodile Marico | 9 | 23 |
| Gouritz | 14 | 16 |
| Inkomati | 12 | 22 |
| Mvoti-Mzimkhulu | 33 | 21 |
| Olifants-Doorn | 11 | 38 |
| Thukela | 0 | 20 |
| Usutu to Mhlathuze | 0 | 20 |

The above table shows that not all Water Management Areas had catchment forums, although the majority of the catchment management agencies had them. Those catchment management agencies that did not have catchment forums also submitted their proposals to the minister, and there seems to be no difference in evaluating the proposal because of the absence of forums in some water management areas. The minister accepted all the proposals, and gazetted the establishment of catchment management agencies on the basis of these proposals.

From the submitted proposal it was also learned that some water management areas had existing catchment forums, while the Department of Water Affairs and Forestry established catchment forums in the other water management areas, following the same process implemented in the Olifants-Doorn Water Management Area. The existing and newly-established forums are shown in table 4.

Table 4: Existing forums, new forums, and forums established by the Department of Water Affairs and Forestry

| WMA | Existing Forums | New Forums | Established by: |
|---|---|---|---|
| Breede | 7 | 0 | |
| Crocodile-Marico | 0 | 9 | Department of Water Affairs and Forestry |
| Gouritz | 3 | 11 | Department of Water Affairs and Forestry |
| Inkomati | 0 | 12 | Department of Water Affairs and Forestry |
| Mvoti-Mzimkhulu | 0 | 33 | Department of Water Affairs and Forestry |
| Olifants-Doorn | 0 | 11 | Department of Water Affairs and Forestry |

The Breede Water Management Area had seven existing catchment forums. These seven were seen as being sufficient, and no new catchment forums were established by the Department of Water Affairs and Forestry. The Gouritz Water Management Area had three existing catchment forums. This was seen as an inadequate number, and the Department of Water Affairs and Forestry established eleven new catchment forums. In those water management areas with no catchment forums, the Department of Water Affairs and Forestry established nine in the Crocodile-Marico; twelve in the Inkomati; thirty-three in the Mvoti-Mzimkhulu, and eleven in the Olifants-Doorn.

Although the existing catchment forums were established by stakeholders in the water management areas and not by the Department of Water Affairs and Forestry, they were not discriminated against. All of them had an equal chance to take part in the public participation process and to contribute to the proposal. In the three water management areas without catchment forums (Berg, Thukela and Usutu to Mhlathuze) the public participation process continued during the establishment of catchment management agency by different representations of the stakeholders.

Chart 5 below is derived from data from the Olifants-Doorn public participation process. It shows the cumulative number of contributions in meetings by the catchment forums, 'other' stakeholders, and the Department of Water Affairs and Forestry.
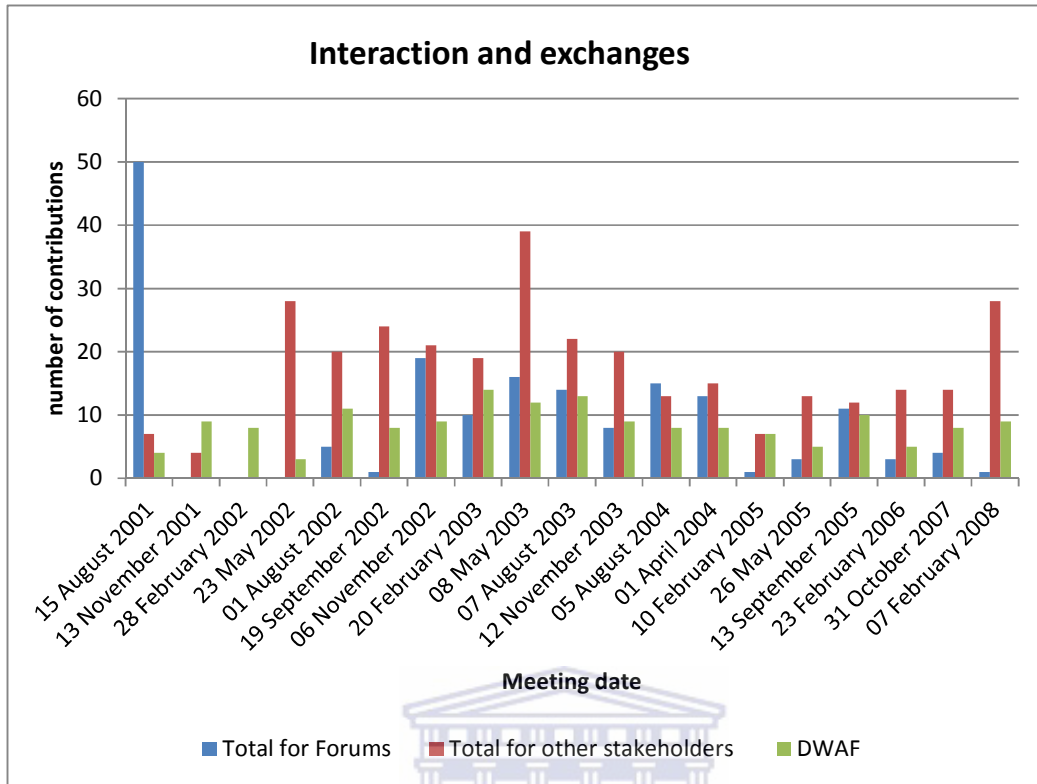
**Interaction and exchanges**

Chart 5: Cumulative number of contributions in meetings by the catchment forums, 'other' stakeholders, and the Department of Water Affairs and Forestry.

The chart indicates that each of the stakeholder groupings (forums, 'other' stakeholders, and Department of Water Affairs and Forestry) have been making contributions to the discussions in the meetings. Column right should not be used to compare the contributions of the 'other' stakeholders to that of the forums. Instead it is a reflection of the stakeholder groupings' contributions in each meeting. For example, on the 8th of May 2003 the 'other' stakeholders appear to have been particularly vocal. However, when one considers that the contributions translate into 39 contributions from 38 stakeholder groups, they amount to about one contribution per group. This means at some meetings there were many participants who were silent and who did not make any contribution to the discussions and debates.

- **Would there have been less public participation in the absence of forums?**

Table 3 and table 4 above show that there were water management areas that did not have catchment forums. However, the process of writing the proposal to establish a catchment

management agency was not delayed. The process was completed, and the proposals were submitted to the Minister. This can be regarded as an indication that catchment forums were not that critical to the process of writing the proposal to establish catchment management agencies. This can also be interpreted as showing the real power of catchment forums, because if it was compulsory for the forums to be part of the process and they were really influential, the proposals in those water management areas where there were no catchment forums were not supposed to have been accepted by the Minister. Furthermore, indications are that the 'other' stakeholder groups numbered more than the catchment forums in all but one water management area. In the same manner as the Department of Water Affairs and Forestry informed, consulted, involved and collaborated with the catchment forums, the department would have interacted with the other stakeholder groups. Imagine the outrage if the department only disseminated information to the catchment forums and not to the other stakeholder groups. It seems that the outcome of the public participation process would have been the same in those instances where catchment forums were absent.

- **What was the significance of the catchment forums in the public participation process?**

The process to write the proposal to establish the catchment management agency in the Olifants-Doorn Water Management Area shows the willingness of the Department of Water Affairs and Forestry to engage in the best possible public participation exercise. This aim was pursued relentlessly by the department. For the public participation process in the Olifants-Doorn Water Management Area, catchment forums almost seemed unnecessary, since there were 38 other stakeholder groups active. By establishing catchment forums, the Department of Water Affairs and Forestry ensured access for anyone who wanted to be part of the process of establishing the catchment management agency. The determination of the department to see the catchment forums succeed could be seen in its continuous input of human and financial resources. This broadening of the opportunity and the scope for public participation was the first significance of catchment forums in the Olifants-Doorn Water Management Area.

The second significance of catchment forums in the Olifants-Doorn Water Management Area was that it became a platform where the department could disseminate information and arrange capacity building events in an organised and focused manner. Because the context of

the catchment forums meetings was less intimidating than that of the Reference Group meetings, forum members were more at ease to ask questions when they were uncertain of things. Furthermore, at the catchment forum meetings participants were allowed to raise any issue, whereas issues raised at the Reference Group meetings were limited to those pertaining to the proposal to establish the catchment management agency.

Catchment forums were geographically based, and in this manner they brought together persons from different race groups, different professional backgrounds, and different water sectors. Through these meetings the existing patterns of association were broken down, and new patterns of association based on geographical proximity were established. In some small way this changed the relationships between various stakeholders, and contributed to building trust among stakeholders who often existed during the Reference Group Meetings.

After the gazetting of the Olifants-Doorn Catchment Management Agency in 2006, the regional office of the Department of Water Affairs continued with its investment in the catchment forums and the public participation process. In August, 2007 there were indications that the National Department of Water Affairs and Forestry was having doubts about a range of issues pertaining to the catchment management agencies in general. In July, 2008, a first draft of the National Department of Water Affairs and Forestry "Institutional Re-alignment Project", entitled "Emerging Institutional Models for Water Sector in South Africa" appeared. This project effectively suspended the establishment of catchment management agencies. The regional Department of Water Affairs and Forestry stopped investing resources in the process of establishing a catchment management agency for the Olifants-Doorn Water Management Area. The eleven catchment forums established ceased to exist, and the advisory role that DE la Harpe (undated) envisaged for these catchment forums never materialised.

# CHAPTER 5
## Summary and Conclusions

### 5.1. Summary Remarks and Recommendations
In this chapter a brief summary of the arguments and discussions presented in the previous chapters are given.

Public participation is a pillar of Integrated Water Resources Management (IWRM). As Dungumaro and Madulu (2003) states, water resource management should ensure that the voices of local communities are heard and their interests considered. Savenije and Van der Zaag (2008) state that "Integrated Water Resources Management therefore acknowledges the entire water cycle with all its natural aspects, as well as the interests of the water users in the different sectors of a society (or an entire region); hence it addresses both the natural and the human dimensions of water". Almost every government document refers to public participation. The crucial challenges facing the issue of public participation in general are the matter of transparency and the empowerment of local people in communities. The role of public participation in decisions that affect the local people in their areas is based on the assumption that no one knows better what is best for a community than the person who lives there. The input of the people is very important in order to manage water resources in that particular area. In other words, the contribution of the community cannot be excluded in water resources management.

The National Water Act (1998) provides the framework for water resource management in South Africa. It outlines the different water management institutions as well as the specific functions of each institutional type. Water resource management institutions within the South African framework are tiered. The first tier is the Department of Water Affairs and Forestry, which acts as a custodian of water resources. The second tier is the catchment management agency, which is responsible for the implementation of catchment management strategy. The third tier is the water user associations. These are organisations where individual water users come together to undertake water-related activities for their mutual benefit. Other types of water management institutions are advisory committees that advise the minister about the composition of the catchment management agency governing board, and also play a role in supporting the establishment of water management institutions. Non-statutory bodies such as

catchment forums and catchment steering committees tend to play a facilitating and supporting role in the establishment of catchment management agencies (De la Harpe et al. undated). Catchment forums are the institutional type that facilitates public participation during the establishment of catchment management agencies. This process occurred during the Reference Group Meetings. The Reference Group was a public participation platform created by the Department of Water Affairs and Forestry to bring stakeholders within a water management area together to deliberate on and formulate a proposal to the Minister of Water Affairs and Forestry to establish a catchment management agency in that particular water management area. The stakeholders were representatives of a range of organisations active within the water management area. In addition to these sectorially-based stakeholders, DWAF established eleven geographically-based catchment forums in the Olifants-Doorn WMA, in order to expand the participation possibilities to include everyone who wishes to participate.

Authors such as Arnstein (1967), Bruns (2003), Chouill (1996), Berkes (1994), Connor (1988), and the International Association of Public Participation indicate that public participation has different levels. The significance of public participation is shown by the levels, and these authors agree that the final stage where the public can influence decision-making is where the public becomes empowered. Thus Warner (2006) states that, given government's reluctance to cede power and citizens' limited aspirations to take it, it is not surprising that most participatory processes remain at the information and consultation stages, the lowest rungs of the ladder (an area Arnstein (1969) rated 'phoney participation'). The highest rung, according to all the authors, is when the stakeholders are party to decision-making. Du Toit and Pollard (2008) are of the opinion that being part of decision-making through the public participation process does not exist in the South African context.

In the various catchment forums as well as the Reference Group meetings, the Department of Water Affairs made a genuine effort to always be transparent, to listen to feedback given by the stakeholders. The department accounted to the stakeholders most of the time, and valued the partnerships to such an extent that it invested significant resources in capacitating forum members to participate in the meetings. However, after the completion of the proposal to establish the catchment management agency was approved and the establishment gazetted,

the department decided to put the operationalisation of the established catchment management agencies on hold, a decision the Reference Group could not influence.

In this study the Public Participation Spectrum of the International Association of Public Participation represents a hierarchy of participation with inform at the lowest level and the consult, involve, and collaborate, with empower, at the highest level. This study has shown that catchment forums in the Olifants-Doorn Water Management Area participated at the level of collaborate. When it is taken into consideration that the higher level includes all the lower levels, catchment forums had sufficient opportunity to influence the decision taken in the process of writing the proposal to establish the Olifants-Doorn Catchment Management Agency, without experiencing the need or having the clout to actually make the decision.

## 5.2. Recommendations

Although this study has shed light on the nature and extent of the public participation process as practised by the Department of Water Affairs and Forestry, a number of issues require further research.

(a)     The issue of sustainability of catchment forums is a problem. It seems a factor affecting the majority of catchment forums is the issue of funding. The reason for this can probably be their status as non-statutory bodies, who therefore cannot demand government subsidies to maintain their organisation. If these forums have no support (especially financial) in order to function, they will probably cease to exist

(b)     Public participation and good governance are claimed to be vital to achieve better management of water resource. In good governance everything is transparent, accountable, efficient and sufficient. From the results that emerged from this research, indications are that good governance is another system of conditions that is still lacking in the way water resources are managed. Public participation, stakeholder involvement, community consultation, etc, are all part of good governance. When participation is lacking, the vision and mission of implementing the National Water Policy can become a challenge. It thus seems critical that the relationship between public participation and good governance be explored further.

(c)     To validate the findings of this study it is necessary to replicate the study of the public participation process in the other eight water management areas where catchment management agencies have been gazetted.

(d)     One of the consequences (albeit not actively pursued) of the establishment of catchment forums in the Olifants-Doorn Water Management Area is that it brought groups of people together who had no apparent reason or platform to meet. These meetings seem to have had an influence on the relationships among the different groups. A study into the contribution of catchment forums to the changing group dynamics in water management areas seems to be important.

**References**

1.  Ako Ako, A., Eyong, G. E. T., and Nkeng, G.E., 2010. Water Resources Management and Integrated Water Resources Management (IWRM) in Cameroon. Water Resource Management (?), 24 (2010) 871-888.

2.  Alterman, R., 1982. Planning for public participation: The design of implementable strategies. Environment and Planning B, 9 (1982) 295-313.

3.  Arnstein, S.R., 1969. "A Ladder of Citizen Participation" AIP Journal, 35 (4): 216-224.

4.  Ashton, P.J., Turton, A. R., and Roux, D. J., 2006. Exploring the Government, Society, and Science Interfaces in Integrated Water Resource Management in South Africa. Journal of Contemporary Water Research & Education, issue 135: 28-35.

5.  Backeberg, G. R., 2005. Water institutional reforms in South Africa. Water Policy, 7 (2005) 107-123.

6.  Biswas, A.K., 2004. Integrated Water Resources Management: A Reassessment. A Water Forum Contribution. International Water Resources Association. Water International, 29 (2): 248-256.

7.  Berkes, F., 1994. Co-management: Bridging the two solitudes. Northern Perspectives, 22 (1994) 18–20.

8.  Bromley, D. W., 1989. Institutional Change and Economic Efficiency. Journal of Economic Issues, 23 (3): 735-759.

9.  Bruns, B., 2003. Water Tenure Reform: Developing an Extended Ladder of Participation. "Politics of the Commons: Articulating Development and Strengthening Local Practices" RCSD Conference, July 11-14, 2003, Chaing Mai, Thailand.

10.     Burt, J., and Sisitka, H. L., 2006. A Critical Review of Participatory Practice in Integrated Water Resource Management. AWARD, Rhodes University, Grahamstown, South Africa. WRC Report No K5/1434. Water Research Commission, Pretoria, South Africa.

11.     Burt, J., McMaster, A., Rowntree, K., and Berold, R., 2008. Local institutions for water governance: A story of the development of a Water User Association and Catchment Forum in the Kat River Valley, Eastern Cape. Water Research Commission Report No. TT 295/07. South Africa.

12.     Butterworth, J.A., Sutherland, A., Manning, N., Dartech, B., Dziegielewsja-Geitz, M., Eckart, J., Batchelor, C., Moriarty, P., Schouten, T., Da Silva, C., Verhagen, J., and Bury, P. J., 2008.  Building more effective partnerships for innovation in urban water management. IRC International water and Sanitation Centre, Delft, the Netherlands.

13.     Cai, X., Lasdon, L., and Michelsen, A.M., 2004. Group Decision Making in Water Resources Planning Using Multiple Objectives Analysis. Journal of Water Resources Planning and Management, 130 (1): 1-14.

14.     Castelletti, A., and Soncini-Sessa, R., 2005. A procedural approach to strengthening integration and participation in water resource planning. Environmental Modelling & Software 21(2006) 1455-1470.

15.      Ghoguill, M. B. G., 1996. A ladder of Community Participation for Underdeveloped Countries. Habitat INTL, 20. (3): 431-444.

16.     Clausen, T. J., and Fugl, J., 2001. Firming up the conceptual Basis of Integrated Water Resources Management. Water Resources Development, 17 (4): 501-510.

17.     Cleaver, F., 1999. Paradoxes of participation: questioning participatory approaches to development. Journal of International Development, 11 (4): 597-612.

18.     Clear, F., and Toner, A., 2006. The evolution of community water governance in Uchira, Tanzania: The implications for equality of access, sustainability and effectiveness. Natural Resources Forum, 30 (3): 207–218.

19.     Cornwall, A., 2008. Unpacking 'Participation': models, meanings and practices. Community Development Journal, 43 (3): 269-283.

20.     Connor, M.D., 1988. A New Ladder of Citizen Participation. National Civic Review, 77 :( 3) 249-257.

21.     Dublin, 1992. The Dublin Statement on Water and Sustainable Development. Dublin Principles. International Conference on Water and the Environment (ICWE) in Dublin. Ireland on 26-31 January 1992.

22.     Dungumaro, E.W., and Madulu, N.F., 2003. Public participation in integrated water resources management: the case? Tanzania. Physics and Chemistry of the Earth 28 (2003) 1009-1014.

23.     Dukhovny, V., Sokolov, V., and Ziganshina, D., 2004. Some ideas about IWRM implementation in Central Asia. Seminar on the role of ecosystems as water suppliers. Convention on Protection and Use of Transboundary Watercourses and International Lakes. Scientific-Information Centre of the Interstate Commission for Water Coordination. Geneva.

24.     Du Toit, D., and Pollard, S., 2008. Updating public participation in IWRM: A proposal for a focused and structured engagement with Catchment Management Strategies. Water SA 34 (6): 707-713.

25.     Farolfi, S., and Rowntree, K., 2005. Accompanying Local Stakeholders in Negotiation Processes Related to Water Through Simulation Models and Role-playing Games: an Experience from South Africa. EMPOWERS Regional

Symposium: End-Users Ownership and Involvement in IWRM 13-17 November, 2005; Cairo, Egypt.

26.    Faysse, N., Cossio, V., Paz, B., Quiroz, F., and Ampuero, R., 2005. Use of a Methodology to Support the design of a short-term Multi-Stakeholder Platform: the case of a water and sanitation project in Tiquipaya (Bolivia). NEGOWAT Project. Bolivia.

27.    Faysse, N., 2006. Troubles on the way: An analysis of the challenges faced by multi-stakeholder platforms. Natural Resource Forum, 30 (3): 219-229.

28.    Funke, N., Oelofse, S.H.H., Hattingh, J., Ashton, P.J. and Turnton, A.R., 2007. IWRM in developing countries: Lesson from the Mhlatuze Catchment in South Africa. Physics and Chemistry of the Earth 32 (15-18): 1237-1245.

29.    Garande, T., and Dagg, S., 2005. Public Participation and Effective Water Governance at the local level: A case study from a small under-developed area in Chile. Environmental, Development and Sustainability, 7 (2005) 417-431.

30.    Greg, H., 1999. Environmental Equity and Public Participation. Policy Sciences, 32 (2): 163-174.

31.    Greyling, T., 1999. Towards Managing Environmental Disputes: Appropriate Public Participation. Prepared for Conference on Environmental Dispute Resolution 10 – 11 June 1998, Fourways, Gauteng. South Africa.

32.    GWP (Global Water Partnership) 2000. Integrated water resources management. TAC background paper no. 4. GWP, SE-105 25 Stockholm, Sweden

33.    GWP (Global Water Partnership) 2002. Introducing effective water governance. Global Water Partnership, Stockholm, Sweden.

34.     Hamalainen, R., Kettunen, E., Marttunen, M., and Ehtamo, H., 2001. Evaluating a Framework for Multi-Stakeholder Decision Support in Water Resources Management. Group Decision and Negotiation, 10 (4): 331-353.

35.     Heller, P., 2001. Moving the State: The Politics of Decentralization in Kerala, South Africa, and Porto Alegre. Politic & Society, 29 (1):131-163.

36.     Henriksen, H.J., Rasmussen, P., Brandt, G., Von Bulow, D., and Jensen, F.V., 2006. Public participation modelling using Bayesian networks in management of groundwater contamination. Environmental Modelling & Software 22 (8): 1101-1113.

37.     Holloway, I., & Wheeler, S., 1995. Ethical issues in qualitative nursing research. Nursing Ethics, 2(3), 223-232.

38.     Hutchcroft, P. D., 2001. Centralisation and decentralisation in administration and politics: assessing territorial dimensions of authority and power. Governance: An International Journal of Policy and Administration, 14 (1): 23-53.

39.     IAP2 (International Association for Public Participation) 2007. The IAP2 Public Participation. USA.

40.     Irvin, R.A., and Stansbury, J., 2004. Citizen Participation in Decision-making: Is it Worth the Effort? Public Administration Review, 64 (1): 56-65.

41.     Jaspers, F. G. W., 2003. Institutional arrangements for integrated river basin management. Water Policy, 5 (2003) 77-90.

42.     Jonker, L.E., 2004. Integrated Management Segregated Thinking – The Case of Water. Paper presented at the 5th WaterNet/WARFSA/GWP Symposium, Windhoek, Namibia.

43.     Jonker, L., Swatuk, L.A., Matiwane, M., Mila, U., Ntloko, M., and Simataa, F., 2010. Exploring the lowest appropriate level of water governance in South Africa.

Water Research Commission Report No. K5/1837/1. University of the Western Cape, Bellville, South Africa.

44.    Jonker, L., and Manzungu, E., 2008. Playing the Water Dance: A Guide to Conducting and Reporting Interdisciplinary Research in Water Resources Management. First Edition. Stellenbosch, South Africa.

45.    Jonker, L., 2007. Integrated water resources management: The theory-praxis-nexus, a South African Perspective. Physics and Chemistry of the Earth 32 (2007) 1257-1263.

46.    Jonsson, A., 2005. Public Participation in Water Resources Management: Stakeholder Voices on Degree, Scale, Potential, and Methods in Future Water Management. Ambio, 34 (7): 495-500

47.    King, C.S., Feltey, K. M., and Susel, B.O., 1998. The Question of Participation: Toward Authentic Public Participation in Public Administration. Public Administration Review, 58 (4): 317-326.

48.    Larson, K.L., and Lach, D., 2007. Participation and non-participants of place-based groups: an assessment of attitudes and implications for public participation in water resource management. USA, Oregon State University, Corvallis.

49.    Mamdani, M., 1996. Citizen and subject: contemporary Africa and the legacy of late colonialism. Princeton, NY: Princeton University Press.

50.    McDaniels, T.L., Gregory, R.S., and Fields, D., 1999. Democratizing Risk Management: Successful Public Involvement in Local Water Management Decisions. Risk Analysis, 19 (3): 497-510.

51.    Merrey, D.J., Drechsel, P., De Vries, P.F.W.T., and Sally, H., 2005. Integrating "livelihoods" into integrated water resources management: taking the integration

paradigm to its logical next step for developing countries. Regional Environmental Change, 5 (4): 197-204.

52.     Merrey, D.J., 2008. Is normative integrated water resources management implementable? Charting a practical course with lessons from Southern Africa. Physics and Chemistry of the Earth 33 (8-13) 899-905.

53.     Mitchell. B., 1990. "Integrated water management", in Integrated Water Management: International Experiences and Perspectives. London, Belhaven press.

54.     Muller, M., 2010. Fit for purpose: taking integrated water resource management back to basics. University of Witwatersrand, Johannesburg, South Africa.

55.     Mysiak, J., Giupponi, C., and Rosato, P., 2005. Towards the development of a water resource management. Environmental Modelling & Software, 20 (2) 203-214.

56.     National Water Act No 36 of 1998. Republic of South Africa.

57.     Pollard, S., 2002. Operationalising the new Water Act: contributions from the Save the Sand Project-an integrated catchment management initiative. Physics and Chemistry of the Earth 27 (11-22) 941-948.

58.     Rahaman, M.M., and Varis, O., 2005. Integrated water resources management: evolution, prospects and future challenges. Sustainability: Science, Practice, & Policy. Water Resources Laboratory, Helsinki University of Technology. Espoo, Finland.

59.     Reitsma, R. F., 1996. Structure and support of water-resources management and decision-making. Journal of Hydrology 177 (3-4) 253-268.

60.     Rhodes, R.A.W., 1996. The new governance: governing without government. Political Studies, 44 (4): 652-667.

61.    Ribot, J. C., 1999. Decentralisation, Participation and Accountability in Sahelian Forestry: Legal Instruments of Political-Administration Control. Journal of the International African Institute, 1 (1999) 23-65.

62.    Rogers, P., and Hall, A.W., 2003. Effective Water Governance. Global Water Partnership Technical Commit (TEC). Sweden.

63.    Rowntree, K., 2006. Integrated Catchment Management through landcare in the Kat Valley, Eastern Cape Province. Physical Geography, 27 (5): 435-446.

64.    Saleth, R. M., and Dinar, A., 2005. Water institutional reforms: theory and practice. Water Policy, 7 (2005) 1-19.

65.    Savenije, H.H.G., and Van der Zaag, P., 2008. Integrated water resources management: Concepts and issues. Physics and Chemistry of the Earth 33 (5): 290-297.

66.    Schonwalder, G., 1997. New Democratic Spaces at the grassroots? Popular participation in Latin American Local Governments. Development and Change, 28 (4): 753-770.

67.    Schreiner, B., Mohapi, N., and Van Koppen, B., 2004. Washing away poverty: Water, democracy and gender poverty eradication in South Africa. UK, United Nations.

68.    Stave, A.K., 2003. A system dynamics model to facilitate public understanding of water management options in Las Vegas, Nevada. Journal of Environmental Management, 67 (4) 303-313.

69.    Simpungwe, E., 2006. Water, Stakeholder and common Ground. Challenge for Multi-stakeholder Platform in Water Resource Management in South Africa. Wageningen University. Wageningen, the Netherlands.

70.     Sherwill, T., Arendse, L., Rogers, K., Sihlophe, N., Van Wilgen, B., Van Wyk, E., and Zeka, S., 2007. Stakeholder connectedness and participatory water resource management in South Africa. Water SA, 33 (4) 505-512.

71.     Steins, N. A., and Edwards, V. M., 1998. Platforms for collective action in multiple-use CPRs. Paper presented at Crossing Boundaries, the Seventh Annual Conference of the International Association for the Study of Common Property, Vancouver, British Columbia, Canada, 10–14 June.

72.     Stoker, G., 1998. Governance as theory: Five propositions. International Social Science journal, 50 (155): 17-28.

73.     Swatuk, L.A., 2005. Political challenges to implementing IWRM in Southern Africa. Physics and Chemistry of the Earth, 30 (2005) 872-880.

74.     Theron, F., Ceaser, N., and Davids, I., 2007. Participation According to AIP2 Principles: Opportunity or Challenge for integrated Development Planning in South Africa. Cape Town: Oxford University Press.

75.     Tropp, H., 2007. Water governance: trends and needs for new capacity development. Water policy supplement, 2 (2007) 19-30.

76.     Turton, R. A., Hattingh, J., Claassen, M., Roux, D. J., and Ashton, P. J., 2007. Towards a model for Ecosystem Governance: An Integrated Water Resource Management Example. Water Resources Development and Management, 1 (2007) 1-28.

77.     UNDP, 1999. The Role of Participation and Partnership in Decentralised Governance: A Brief Synthesis of Policy Lessons and Recommendations of Nine Country Case Studies on Service Delivery for the Poor. UNDP, New York.

78.     Van der Zaag, P., 2005. Integrated Water Resources Management: Relevant concept or irrelevant buzzword? A capacity building and research agenda for Southern Africa. Physics and Chemistry of the Earth 30 (2005) 867-871.

79.     Van Maanen, J., 1979. Reclaiming Qualitative Methods for Organizational Research: A Preface. Administrative Science Quarterly, 24 (4): 520-526.

80.     Warner, J.F., 2006. More Sustainable Participation? Multi-Stakeholder Platforms for Integrated Catchment Management. Water Resources Development, 22 (1): 15-35.

81.     Warner, J.F., 2007. Multi-Stakeholder Platforms for Integrated Water Management. Aldershot, England, Ashgate.

82.     Warner, J.F. and Simpungwe, E., 2003. Stakeholder participation in South Africa: Power to the people? Paper presented at 2nd International Symposium Integrated Water Resources Management (IWRM): Towards Sustainable Water Utilization in the 21st Century, ICWRS/IAHS, Stellenbosch, Western Cape, South Africa, 22–24 January.

83.     Warner, J., 2005. Multi-Stakeholder Platforms: Integrating society in water resource management? Ambiente & Sociedade, 8 (2): 1-20.

84.     Warner, J., and Van Buuren, A., 2009. Multi-Stakeholder Learning and Fighting on the River Scheldt. International Negotiation 14 (2009) 419-440. Martinus Nijhoff, Wageningen, University Rotterdam. The Netherlands.

85.     Warner, J., Waalewijn, P., and Hilhorst, D., 2002. Public Participation in Disaster-Prone Watersheds. Time for Multi-Stakeholder Platform? Paper for the Water and climate Dialogue. Disaster Studies. Wageningen University, Netherlands.

86.     Wester, P., Merrey, D.J., and De Lange, M., 2003. Boundaries of Consent: Stakeholder Representation in River Basin Management in Mexico and South Africa. World Development, 31(5): 797-812, 2003.

**Data sources**

87.     DWAF, 2001. Generic public participation guidelines. Third draft. Durban, South Africa.

88.     De la Harpe, J., Ferriera, J., and Potter, A., undated. Department of Water Affairs and Forestry. Water Management Institutions Overview. Pretoria, South Africa.

89.     DWAF, 1997. White paper on a National Water Policy for South Africa. Pretoria, South Africa.

90.     DWAF, 2001. Inkomati Water Management Area. Proposal for the establishment of a Catchment Management Agency for the Inkomati Basin. Mpumalanga, South Africa.

91.     DWAF, 2002. Mvoti to Mzimkulu Water Management Area. Proposal to Establish the Mvoti to Mzimkulu Catchment Management Agency. KwaZulu Natal, South Africa.

92.     DWAF, 2005. Olifants-Doorn Water Management Area. Proposal for the establishment of the Olifants-Doorn Catchment Management Agency. Western Cape, South Africa.

93.     DWAF, 2005. Gouritz Water Management Area. Proposal for the Establishment of the Gouritz Catchment Management Agency. Western Cape, South Africa.

94.     DWAF, 2004. Breede Water Management Area. Proposal for the Establishment of the Breede Catchment Management Agency., Western Cape, South Africa.

95.     DWAF, 2004. Usutu to Mhlathuze Water Management Area. Proposal to Establish the Usutu to Mhlathuze Catchment Management Agency. Kwazulu Natal, South Africa.

96.     DWAF, 2004. Thukela Water Management Area. Proposal for the Establishment of the Thukela Catchment Management Agency. Kwazulu Natal. South Africa.

97.     DWAF, 2003. Crocodile West Marico Water Management Area. Proposal for the Establishment of the Crocodile West Marico Catchment Management Agency. Gauteng, South Africa.

98.     DWAF, 2007. Berg Water Management Area. Proposal for the Establishment of the Berg Catchment Management Agency. Western Cape, South Africa.

99.     DWAF, 2004. Integrated Water Resource Management. Institutional Roles and Linkages situational assessment: WMA17: Olifants-Doorn. Integrated water resource management strategies, guidelines and Pilot implementation in three water management Areas, South Africa. Western Cape, South Africa.

**Online sources**

100. Grass Roots Education IAP2, 2010. Core value for the practice of public participation [Online] Available http://www.swc.org.za/own/uploads/grassroots.pdf accessed on 28 September 2010.

101. ESCAP, 2010. What is Governance? [Online] UN- Economic and Social Commission for Asia and Pacific Available http://www.unescap.org/pdd/prs/ProjectActivies/ongoing/gg/governance.asp accessed on 04 October 2010