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Public participation in Integrated Water Resource Management in South Africa: Current, potential and suggested future approaches

Tamsyn Sansom-Sherwill

A dissertation submitted to the Faculty of Science, University of the Witwatersrand, for the Degree of Master of Science.

DECLARATION

I declare that this dissertation is my own, unaided work. It is being submitted for the Degree of Master of Science at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in any other University.

_____

Tamsyn Anita Sansom-Sherwill

6 March 2006

ABSTRACT

South Africa's new water policy and law have introduced the requirement for public participation in all aspects of resource management and decision-making. This policy change is in recognition of the potential benefits of participation in generating more informed, acceptable, equitable and sustainable management of the nation's water resources. However the new water law does not prescribe the form this participation should take, or offer criteria for evaluating the success of participatory processes. The term 'public participation', in its contemporary usage worldwide, is poorly or broadly defined and may thus encompass a range of processes, which differ in the roles and influence afforded to their stakeholder participants, and in their ability to deliver desired outcomes and benefits to government or the public. This study aimed to investigate the influence of this procedural variation on public and stakeholder participation in the implementation of the National Water Act (Act no. 36 of 1998) in South Africa, and thereby recommend a preferred approach to conducting and facilitating these processes in the future. Use was made of a qualitative and primarily inductive research approach. This was designed to gather perspectives of the various role-players (stakeholders, specialists and government) for a desired process and outcome of participation, and to link process and outcome by means of two case studies of the current implementation of participatory processes for water resource management decision-making. Both case studies illustrated the over-riding negative influence of a product-oriented and 'specialist-centred' approach to participation, focused on the development of specific statutory products or decisions required by the National Water Act. This approach in turn is being driven by the current fragmentation of participation around these different products and stages of the overall resource management process. A recommended alternative is a more process-oriented, 'stakeholder-centred' approach to participatory events, within an integrative, ongoing participatory process. This must be based on mutual learning by all role-players, and an emphasis on inter-sectoral interaction and relationships. A key constraint identified to the achievement of more integrative participatory processes that offer influence to, and generate ownership by, stakeholder participants, is the lack of clarity within government and the South African water sector as to the intent of participation within the new water policy, and thus the process by which this participation should take place. In particular, the role of stakeholders, and how much influence or power they should be afforded in decision-making processes, is subject to individual interpretation. The recommendation from this research is that, given the ideals of equity, sustainability and citizen empowerment aspired to by the Constitution and the new water policy, government should strive to fully engage stakeholders in processes that both offer influence and inspire action. Ideally, linkages should be created to extend this influence to the broader political process.

To my Dad,

Bill Sherwill

(1932 – 2004)

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GLOSSARY (including acronyms)

ARM **Adaptive Resource Management**

CMA **Catchment Management Agency**
CMAs are statutory bodies established under Ch. 7 of the NWA. One CMA is to be established for each of the 19 Water Management Areas in South Africa.

DIPs **Deliberative and Inclusive Processes**

DFS **Desired Future State**

DWAF **Department of Water Affairs and Forestry**

EMC **Ecological Management Class**
(As defined within the Olifants River Ecological Water Requirements Assessment manuals): The class (A, B, C or D) which describes the condition for which a river should be managed and protected – where A is virtually unchanged from the natural state, and D is largely modified but still able to provide the required services and resources.
Note: The EMC is now referred to by DWAF as the 'Recommended Ecological Category'.

PES **Present Ecological State**

IFR **Instream Flow Requirement**

IWRM **Integrated Water Resource Management**
(As defined by Gorgens et al. (1998), and accepted and used by DWAF):
Integrated Water Resource Management is simultaneously a philosophy, a process and an implementation strategy to achieve equitable access to and sustainable use of water resources by all stakeholders at catchment, regional, national and international levels, while maintaining the characteristics and integrity of water resources at the catchment scale within agreed limits.

NWA **National Water Act**

Reserve

The 'Reserve' refers to the quantity and quality of water required –
to satisfy basic human needs by securing a basic water supply
to protect aquatic ecosystems in order to secure ecologically sustainable development and use of the relevant water resource.

SAM Strategic Adaptive Management

Social capital

Use of this term is intended to refer to the existence of groups in society and the advantages gained by individuals through their membership of groups or communities. Coleman (1988 p. S98) defines social capital as the "structure of relations between actors and among actors" that acts as a resource for individuals enabling productive activities.

Stakeholders

Though it is recognised that all participants (including government, managers and scientists) have a stake in the outcome of resource management decisions, the term 'stakeholders' as used in this document refers to catchment resource users, where the resource refers to the entire river ecosystem and not just the water it provides. This is in keeping with the general usage of this term by DWAF.

Sustainability

It is not the purpose of this thesis to debate the definition or usefulness of the widely used yet controversial concept of sustainability. Use of this term will mainly be in relative terms, and is intended to imply the maintenance of the renewability or resilience of the resource base. Sustainable management implies that the resource is likely to be able to continue to supply a given level and set of ecological goods and services into the long-term future. An increase in sustainability implies a greater certainty of this continued supply.

WMA Water Management Area

Statutory area, the water resources of which will be governed by a Catchment Management Agency, and whose boundaries generally correspond to that of a primary or secondary catchment.

CHAPTER 1:

INTRODUCTION, RATIONALE AND AIM

1.1 Public participation: A new policy context for South African water resource management

Participatory resource management is one of the key features of South Africa's new water policy. This policy recognises that it is only by successfully involving stakeholders at all levels that more equitable and sustainable use of the nation's water resources will ever be achieved. The 1997 White Paper (DWAF, 1997) and its accompanying legislation, the National Water Act (Act no. 36 of 1998), in turn are one of a suite of new policies and laws designed to build and strengthen the country's fledgling democracy, to redress past imbalances, and to transform South African society.

Motives for using participation, in governance worldwide, are both democratic and practical (Dorcey, 1991; Pretty, 1995). Participation can lead to a sense of ownership of decisions and policies leading to reduced resistance and even cooperation in implementation (Thomas, 1995). Participatory processes also provide a voice for groups marginalised by broader political and economic processes, enabling them to have a say in decisions that affect them (World Bank, 1996; Holmes and Scoones, 2000).

1.2 Rationale for research into procedural elements of participation

Though the White Paper and the National Water Act demand "public participation" they are not prescriptive of how this should take place. No definition is offered for the type of stakeholder involvement that is envisaged, and no criteria are given by which the achievement of "participation", or its intended benefits, should be measured or evaluated.

Procedural aspects of policy implementation are likely to have a considerable influence on the degree – and direction – of social and environmental change. Not all participatory processes will inspire ownership of their outcomes, and may even increase resistance to policy

implementation where perceived as 'tokenism' by participating stakeholders (Thomas, 1995). Many stakeholders have much to lose with the transition to more equitable and sustainable resource use, and will offer opposition to those promoting such a change. It is also not inevitable that the opportunity which participatory processes offer to increase the influence of marginalised groups will be realised in the face of existing power imbalances within the participating group and society (Both Ends, 2000). The impact of power imbalances is a particular concern in South Africa, where the inequities created by the very recent colonial and apartheid past are both extreme and extensive.

Consultative processes are bringing together people and sectors that have lived in conflict, or simply just ignorance of each other, under past regimes. Similarly, the new policy of participatory management has introduced the requirement for considerable interaction between specialists and stakeholders. This has no precedent in previous policy (Greyling, 1997) and is a very new and challenging experience for all concerned.

Approaches that have succeeded in other, particularly First World, countries may fail when faced with the unique combination of challenges of resource and stakeholder capacity in South Africa. The pilot implementation processes in several catchments across South Africa offered an invaluable learning opportunity, which can be used to inform and improve future implementation.

This study aimed to respond to this imperative and opportunity, by investigating the influence of procedural variation on the outcomes of participatory decision-making for Integrated Water Resource Management.

1.3 Overall research aim

To explore, analyse and evaluate existing and potential future approaches to, and ultimately propose guiding principles for: the successful management and facilitation of public participation in decision-making for Integrated Water Resource Management, in South Africa, under the National Water Act.

Successful participatory processes are considered to be those that are likely to bring about greater equity and sustainability of resource use.

This aim will be achieved through three objectives, described below.

1.4 Objectives

Objective 1: Current implementation approaches

To analyse and evaluate approaches to participatory decision-making currently being implemented by DWAF.

- What type of process is currently being implemented?
- What are the outcomes?
- What procedural variables are likely to have contributed to these outcomes?

Objective 2: Alternative approaches

To analyse and evaluate alternative approaches to participatory decision-making applicable to the South African WRM context.

- What are the key procedural elements that distinguish particular approaches?
- What are the likely outcomes of different approaches?

Objective 3: Best achievable approach

To propose guiding principles for, and key procedural elements of, a successful participatory process.

- What are the features and principles of such an approach?
- What factors currently facilitate or constrain the implementation of such an approach?

1.5 Approach to meeting aim and objectives

Details of the methodology employed will be presented in Chapter 4, but a broad overview is sketched here.

1.5.1 Qualitative, exploratory action research

The nature of the question being asked in this study required that it be addressed through a qualitative research process. Of interest were the experiences, perspectives and preferences of participants in decision-making processes. This is textual information and thus qualitative data.

Given the novel character of the processes under investigation, in South Africa, and even internationally, this research was exploratory in nature, building on new findings and perceptions and adjusting its focus in an inductive and adaptive way.

The unfolding implementation process provided an opportunity to interact with and within a 'work in progress' and to contribute to this work along the way. This study thus falls within the realm of 'action research' (Lewin, 1946 in Ezzy, 2002). Participants both influenced, and were influenced by, the research process, as this study attempted to contribute developing

insights to the challenging 'learning-by-doing' process of implementing South Africa's new water policy and vision.

The approach taken to addressing the aim of this study in essence involved using (along with the relevant literature) a variety of methods, experiences and interactions, to gather perspectives of past, present and future water resource management, and then to use these to build a vision for a future participatory management system.

1.5.2 Linking process and outcome

This study was designed to explore and evaluate processes through exploring and evaluating their outcomes. The desired outcomes of participatory processes have been articulated through the National Water Policy and the National Water Act – in the broadest sense these are equity, sustainability and efficiency of water resource use. The types of participatory outcomes that lead to these broad goals are less well articulated, and will be explored further in this thesis, along with the processes that lead to these outcomes. Outcomes are distinguished from outputs, or products of participatory processes such as documents or decisions, and along with such products also include process outcomes such as 'buy-in', relationships, trust, and enhanced stakeholder capacity.

A potential set of favourable outcomes will be explored in the theoretical framework (Chapter 2), and built on as the thesis progresses. The gathering of the perspectives of various role-players, on past, present and future participatory processes, will explore views on, and preferences for, both process and outcome. The case studies will focus on assessing outcomes, analysing processes and inferring potential links between these. These observations will be used, along with the relevant literature, to build a model of alternative approaches, linking process variables with potential outcomes. Finally, all of these insights will be used to develop a composite approach to managing and facilitating participatory processes based on complementary processes, and overarching principles for the implementation of these.

1.6 Structure of thesis

The structure of the thesis reflects the chosen approach (as described above) to addressing the research aim.

Chapter 1 (this chapter) introduces the study, its rationale, the study objectives and the approach to meeting these. Chapters 2 and 3 (Theoretical Framework and Policy Context) respectively provide the theoretical and contextual background to this research purpose and approach.

Chapter 4 provides an explanation of the research methods used and how these were combined to address various aspects of the objectives.

Chapter 5 presents some of the direct outcomes of the methods applied: perspectives of the various role-players (stakeholders, specialists and government) of past, present and future water resource management, which is the raw material from which the rest of the study draws.

Chapter 6 and 7 directly address Objective 1, by providing an assessment of current implementation practices, in the form of two case studies, the Inkomati CMA proposal process (Ch. 6), and the Olifants Reserve determination process (Ch. 7).

Chapter 8 is used to propose a model for categorising contrasting approaches, linking outcomes with processes and thereby predicting the likely outcomes of procedural choices for implementing the NWA's requirement for participation.

Finally, in Chapter 9 an approach is selected from this model, and developed further into a set of principles and processes for conducting successful participatory processes. These are then positioned within the broader context of the role of participation in IWRM in a democratic South Africa.

CHAPTER 2:

THEORETICAL FRAMEWORK

2.1 Introduction: A theoretical framework for investigating and evaluating participatory processes

This chapter contextualises this thesis within the theoretical and conceptual background that inspired and directed this research. The concepts introduced by the rationale and objectives outlined in the previous chapter (Ch. 1) will be defined and discussed in further detail here. The particular policy and resource context of South Africa, also introduced by the rationale and objectives presented in the previous chapter, will be discussed in Chapter 3.

2.2 Defining 'public participation'

The most important feature of the use of the term 'public participation', of relevance to this study, is that it is widely used but poorly, or at least very broadly, defined. As Pretty (1995) points out, the term 'participation' has become 'fashionable', attracting and supporting many different interpretations, some of which, it is claimed, hinder rather than support desired outcomes such as sustainability. However, it is the non-prescriptiveness of this term that has provided the rationale for this thesis, and use of the term in this document will imply or refer to the entire broad range of processes it is used to describe.

The following definitions set the boundaries for, and provide examples of, this range:

Defined by purpose:

- "…forums for exchange that are organised for the purpose of facilitating communication between government, citizens, stakeholders, interest groups and businesses regarding a specific decision/problem" (Renn *et al.*, 1995b p. 2). (This definition excludes protests, expert workshops and members of the public serving as government officials, but includes public hearings, public meetings, 'focus groups',

surveys, 'citizen advisory committees', referendums and negotiation, among other models.)

Defined by outcome:

- "Participation is a process in which stakeholders influence policy formulation, alternative designs, investment choices, and management decisions affecting their communities and establish the necessary sense of ownership" (World Bank, 1993, p. 16).

Defined by process:

- "Public involvement is any systematic means by which citizens and government exchange information, share viewpoints, identify issues, explore options and/or arrive at solutions regarding a government initiative. The method ranges from conducting an opinion poll, distributing a policy paper for comment, to an intensive examination of issues in a 'multi-stakeholder' process." (BCRTEE, 1994 p. 2).

The range of procedural variation that falls within the realm of 'participation' will be discussed in a later section (Section 2.5), after an exploration of the motives for employing participatory processes in governmental decision-making, and particularly for natural resource management.

Note: A distinction is sometimes drawn between stakeholder and public participation (Holmes and Scoones, 2000). Stakeholders usually refer to a smaller subset of the 'public' with a clear, often sectoral, interest in the outcome of a decision-making process, whereas the 'public' is referred to in the broader sense of 'civil society'. In the realm of South African WRM, which is the focus of this study, participation is focused on WRM stakeholders. However, for the purposes of this thesis the terms will be used interchangeably, along with public involvement.

2.3 Why public participation in natural resource management?

Over the last two decades there has been a worldwide trend of increasing public and stakeholder involvement in decision-making for natural resource management (Rhoads *et al.*, 1999; Tuler and Webler, 1999). This trend reflects a growing recognition of the potential benefits of, and also the democratic imperatives for, greater citizen involvement in governance, particularly in the environmental sphere (Renn *et al.*, 1995a; Holmes and Scoones, 2000).

2.3.1 Potential benefits of public participation in governance and in decision-making

Increasing public involvement in all aspects of governmental decision-making is being driven by two contrasting (but not incompatible) motives: emphasising either practical/pragmatic benefits or ethical/democratic principles (Dorcey, 1991; Webler and Renn, 1995; Pretty, 1995). From a pragmatic perspective, participation is a means to increase the efficiency of policy-making and implementation (through, for example, reducing public opposition to new

policy), whereas from an ethical or democratic perspective, participation is a fundamental right (Pretty, 1995) – all citizens should be able to have an influence on political decisions that impact on their livelihoods (Webler and Renn, 1995).

The following benefits have been presented as potential motives for conducting participatory processes:

- **Educating and informing** the public (Thomas, 1995).
- Improving the knowledge base, and including a broader range of views in the decision-making process, thereby generating **more informed, wiser decisions** (Holmes and Scoones, 2000; Thomas, 1995).
- **Reducing public opposition** and strengthening the perceived legitimacy of new policy, **with consequent cooperation** and even **assistance in implementation** (Holmes and Scoones, 2000; Thomas, 1995) particularly by providing an opportunity to incorporate public concerns into policy as it is being developed (Thomas, 1995).
- **Reducing or resolving conflict** between government and public (Webler and Renn, 1995).
- **Building a sense of ownership** by participants of policy and decisions (Pretty, 1995; Webler and Renn, 1995).
- Enabling different sectors of the public to hear and **understand each other's views** and thereby develop a greater understanding of the range of values and perspectives about a decision or issue (BCRTEE, 1994).
- **Incorporating questions of value and ethics** in policy decisions (Holmes and Scoones, 2000).
- Enabling the **transformation of citizen's values and preferences** (Smith and Wales, 1999; Holmes and Scoones, 2000).
- Creating opportunities for **social learning** by participants, which can lead to social change (World Bank, 1996).
- Creating **opportunities for collaboration among stakeholders** (World Bank, 1996).
- Improving the long-term efficiency of policy processes through **building positive relationships** (Susskind and Cruikshank, 1987).
- Providing a **voice for those marginalised or disadvantaged** by broader political and economic processes (Holmes and Scoones, 2000).
- Providing for greater **fairness, equality and social justice** in policy making (Holmes and Scoones, 2000).
- **Empowering participants**, through what they learn in participatory discussions (Pretty, 1995; Holmes and Scoones, 2000).
- Strengthening the **capacity of local people to learn and to act** upon what they have learnt (Pretty, 1995).
- Providing for **checks and balances on governmental power** (Both Ends, 2000).
- Improving the **transparency and accountability** of decision-making (Pretty, 1995).
- Enhancing the **responsiveness and legitimacy** of public institutions (Webler and Renn, 1995).

Finally, it is believed that successful public participation can lead to a stronger democracy. As Thomas (1995, p.7) explains: "Giving people more and better opportunities to take part in their own governance can transform them from subjects of particular governmental arrangements to citizens vested in and supportive of those arrangements. Similarly, the broadening of participatory opportunities can strengthen society by assuring that the actions of government are embedded in society, rather than imposed on society."

The contexts of environmental and natural resource management (a particular instance and context of which forms the focus of this research) provide particularly strong motives for involving the public in successful participatory processes, and these are discussed next.

2.3.2 Imperatives for participation in natural resource management

Motives for involving the public in natural resource management processes stem from two central realities. In short: environmental policies are difficult to implement, and environmental policy decisions are difficult to make.

The first imperative for participatory decision-making for natural resource management is that such decision-making is challenged by the fact that ecosystems are complex, variable, and incompletely known or understood. There is often huge uncertainty in the relevant science (Dorcey, 1991; Holmes and Scoones, 2000), and environmental problems usually extend over large temporal and spatial scales (Renn *et al.*, 1995b). The complexity, uncertainty and potentially long-term duration and impact of environmental effects are seen to remove the justification for experts to decide on these problems alone (Holmes and Scoones, 2000). Allied to this, there is growing evidence of public mistrust of scientific expertise, political leaders and state institutions (Holmes and Scoones, 2000).

Environmental and resource management decisions generally involve a broad range of conflicting interests and values (Renn *et al.*, 1995b; Rhoads *et al.*, 1999). Such decisions are usually multi-objective: they are required to jointly maximise social, ecological and economic goals, and to distribute these benefits (and accompanying costs) across a wide range of stakeholder groups. Most often these objectives are conflicting. Such multi-criteria problems are impossible to optimise (Arrow and Raynaud, 1986) and there can be no single 'right' or systematic solution. In a democratic society the challenge of such distributive decisions is therefore to distribute the costs and benefits of resource use equitably.

A second imperative for public participation in environmental decision-making is that environmental policies, more than most, are difficult to implement. Governments, particularly in developing countries, and given the large spatial scales involved, have minimal capacity to enforce environmental policies and laws (Palmer *et al.*, 2000). Impacts on the resource take place at the level of individual resource users, and attaining the voluntary compliance of these individuals is the most cost-effective route to successfully implementing environmental policies (Gardner, 1989).

On a purely practical level, therefore, it is in the interests of governments or resource managers to gain the cooperation of resource users in achieving their goals. As people do not readily support decisions or policies they have not been involved in creating (DWAF, 1996), participation is a potential means toward achieving stakeholder compliance and improving implementation success.

2.4 Potential risks of public involvement processes

Though the perceived benefits providing motives for employing participatory processes are substantial, there are also risks. The following are potential or perceived risks of conducting participatory decision-making processes:

Inefficiency, delay and expense:

- Involving the public makes processes less controllable, and involves the risk of slowing down planning and decision-making processes, perhaps even to the point of deadlock (Thomas, 1995), with accompanying economic efficiency concerns.

Poor decision quality:

- Public participation can threaten the quality of the decisions that are made (Thomas, 1995), in part because public involvement is likely to deter innovation – procedures that emphasise openness, are "well designed to stop things, and ill designed to get things moving…" (Cleveland, 1975 p. 4). The broader diversity of views and people which participatory processes bring together can deter productivity by diluting the focus of decision-making, and there is a greater chance of ideas for action being opposed with more people encouraged to speak their mind. Many people (both government and public) also fear that the public are not qualified to make decisions about issues involving scientific knowledge (Smith and Wales, 1999).

Process focus results in decisions that sacrifice sustainability:

- Gardner (1989 p. 351), in an analysis of approaches to decision-making for sustainable development, warns that where the focus of bargaining and negotiation is strongly process-oriented it "is conceivable that … [the] process … though rigorously and diligently pursued, could result in decisions contrary to maintenance of ecological integrity". This concern is echoed by Brueckner (2002 p. 2), who predicts a "potential incongruity between democratic processes and basic sustainability priorities or ecological rationality". The concern is that where the stakes are high, and resources are scarce and contested, following a quality process (i.e. attention to fairness, openness and reaching agreement) without paying similar attention to the quality of the decision which is reached (i.e. based on adequate and reliable information, conforming to quality criteria such as sustainability or the maintenance of ecological integrity) could lead to a decision which violates these quality criteria – even though

this decision reflects the collective will because consensus has been reached through a 'good' (fair) process.

Increased conflict:

- Participatory processes, through bringing together groups with widely varying values and interests, may actually expand the scope of conflicts (Webler and Renn, 1995; Thomas, 1995) through generating or aggravating conflicts among competing groups (World Bank, 1996).

Threats to the common good:

- Certain groups or individuals could use the opportunity provided by participation to pursue broader political or social objectives (Webler and Renn, 1995) and thereby effectively 'hijack' participatory processes for their own ends. Direct involvement of the public in decision-making is seen by some as a threat to the common good because it creates an opportunity for the use of self-interested strategic behaviour (Laird, 1993).

Entrenching inequality:

- In the presence of power imbalances participatory processes may serve only to recreate the conditions of inequality they seek to redress (Both Ends, 2000). This issue will be discussed in more detail later (Section 2.8).

Thus, unsuccessful participatory processes could achieve the opposite of the benefits intended. As Thomas (1995 p. 2) points out: "when it fails, and it has frequently failed, public participation can leave in its wake a dissatisfied and even resistant public, ineffectual decisions, and a weakened if not faltering democracy." Existing conflicts can be exacerbated, and relationships destroyed, both with government and with other participating sectors and individuals. A particular danger is that participation can raise expectations (Holmes and Scoones, 2000) leading to ultimate disillusionment and withdrawal if these expectations cannot be met.

Any attempt at suggesting principles and processes for successful public participation must therefore take into account not only the benefits sought, but also the risks and challenges outlined above. The range of 'participation', and the levels of benefit and risk associated therewith, is explored in the next section.

2.5 Categorising participatory processes: Spectrums of participatory purpose, process and outcome

Given the non-prescriptive nature of the term and concept of 'participation', both the process and outcome of participatory processes conducted in environmental policy processes across

the world are highly variable. Achieving the potential benefits of participation is subject to the effects of procedural variation (Tuler and Webler, 1999; McCool and Guthrie, 2001; Buchy and Race, 2001) and, most likely, the contextual influences of a particular setting (Tuler and Webler, 1999).

Several authors have therefore described the variety of participatory approaches in terms of spectra, or levels of participation, emphasising as distinguishing criteria the purpose, process or outcome of participation (though specific use of one of these axes is seldom stated explicitly).

2.5.1 Arnstein's (1969) ladder

Most likely the earliest categorisation of 'levels' of public participation is Arnstein's famous 'ladder of participation', which strongly reflects an ethical-democratic orientation, and is based entirely on outcomes, in particular the outcome of 'power' and the degree of 'power-sharing' between government and public. The degree of influence or power attained by the public is also suggested to implicitly contribute to power-sharing between what Arnstein refers to as the 'haves and have-nots'.

The model describes eight levels of participation, arranged in a ladder pattern with each rung corresponding to the extent of citizens' power in determining the end product. The levels of participation defined by Arnstein (1969 p. 217) are as follows:

(Non-participation)
1. Manipulation
2. Therapy

(Degrees of tokenism)
3. Informing
4. Consultation
5. Placation

(Degrees of citizen power)
6. Partnership
7. Delegated power
8. Citizen control

The first two levels are not considered to be forms of 'participation' at all, but instead are used to enable power holders to "educate" or "cure" participants. Levels 3 to 5 are token forms of participation, as citizens may hear and be heard, but lack the power to ensure that their inputs actually influence decisions. Levels 6 and 7 involve increased power-sharing with citizens, until they ultimately exercise control (level 8) through having a majority of decision-making seats, or full managerial power. Partnership involves a redistribution of power through

negotiation, in which rules are agreed on which determine joint roles for citizens and government in planning and decision-making.

2.5.2 Pretty (1995)

Pretty (1995 p. 1252) presents a similar categorisation (adapted from Pretty, 1994 and Satterthwaite *et al.*, 1995) to describe how people participate in development programs and projects, and to suggest how this should happen in the future:

1. Manipulative participation
   A "pretence"; representatives have no power.
2. Passive participation
   Unilateral; participants are told what has been decided, but their responses are not sought or heeded.
3. Participation by consultation
   People are consulted or answer questions; external agents define problems; participants are given no share in decision making; and there is no obligation to take on board people's views.
4. Participation for material incentives
   Participants contribute labour in return for food or cash.
5. Functional participation
   External agencies see participation as a means to achieve project goals, e.g. to reduce costs. Can be interactive with shared decision-making, but usually major decisions have already been made.
6. Interactive participation
   Joint analysis and development of action plans, by participants and external agents, form or strengthen local institutions. Participation is viewed as a right. The process uses (p. 1252) "interdisciplinary methodologies that seek multiple perspectives and make use of systemic and structured learning processes. As groups take control over local decisions and determine how available resources are used, so they have a stake in maintaining structures or practices."
7. Self-mobilization
   "People participate by taking initiatives independently of external institutions to change systems. They develop contacts with external institutions for resources and technical advice they need, but retain control over how resources are used."

Both Pretty's and Arnstein's spectra reflect an ethical-democratic motive, and propose that only the 'higher' levels of the spectrum (referred to as the 'interactive' levels) are desirable or beneficial.

2.5.3 Both Ends (2000)

The NGO Both Ends presents a simpler, but similar, categorisation. Levels of public participation are again classified on the basis of a changing locus of power. The following progression is said to occur for participants' roles (Both Ends, 2000): passive beneficiaries → carrying out tasks and functions defined by others → active consultation → participation in planning, implementation, monitoring and evaluation → autonomous decision-making.

Interestingly the authors refer to the spectrum as indicative of a wide variety of *attitudes* held by decision makers, policy developers and resource managers, which still fall within the range of processes that are termed 'participation'.

2.5.4 IAP2

The International Association for Public Participation (IAP2) presents a spectrum which reflects the main levels shared by those described above, being based on increasing levels of public impact, but with the important distinction of being without the value judgements placed on levels by many authors (i.e. those employing more ethical-democratic assessments of participation). In IAP2's view all levels are considered to be appropriate depending on their purpose. In their view participatory processes are designed primarily to either (IAP2, 2004):

1. Inform
   Provide balanced and objective information and thereby assist the public to understand the problem, alternatives and/or solutions.
2. Consult
   Obtain feedback from the public on alternatives and/or decisions.
3. Involve
   Work directly with the public throughout the overall processes to ensure that their issues are understood and considered.
4. Collaborate
   Partner with the public in all aspects of decision-making.
5. Empower
   Final decision-making power is placed in the hands of the public.

2.5.5 'Instrumental' versus 'transformative' participation

Buchy and Race (2001) propose that participatory processes fall into two categories, based on intent (of the organising agency). Government intention for, or attitude toward, participation is either as a conceptual approach (implying a particular ethic and philosophy), or merely as a tool for implementation (one of several available methodologies). A distinction is thus drawn between 'instrumental' and 'transformative' participation (Nelson and Wright, 1995 in Buchy and Race, 2001), "in other words, using participation as a tool for a specific end or embracing

participation as a mechanism for social change." This intent in turn has "profound implications for the type of participatory process chosen, the resources needed to support the process (in terms of finance and social capital), the expected outcomes and the role of the communities or stakeholder groups" (Buchy and Race, 2001 p. 294). Often, stakeholders participate in a process with the expectation of change, whereas the practitioners involved, "who may not have a mandate to foster social change", perceive and apply the process merely to gather and disseminate information.

2.5.6 Public participation as a form of participatory democracy

Participation, taken to the extreme end of all these spectra, across all levels and spheres of governance, is essentially a form of governance known as 'participatory democracy', also termed 'direct democracy' (Lawson, 1993; Cortner and Moote, 1999). As South Africa, like most nations worldwide, is a 'representative democracy' (wherein the mandate for decision-making rests with elected officials), discussion of the role of participation will be kept within these limits.

2.6 Choosing a level of participation: Calls for 'deeper' participatory processes

Both Ends (2000) report that most of the participation carried out in recent years has been at the lower end of their spectrum, where stakeholders or the public merely play a role as passive beneficiaries or to carry out tasks defined by others. Active consultation is still developing, while evidence for use of the last two levels (participation in planning, implementation, monitoring and evaluation; autonomous decision-making) is extremely rare in present resource management processes worldwide. Similarly, Dorcey (1991 p. 572) proposes that the innovations in public participation since the 1970s have in very few instances gone "beyond some form of consultation to give decision making responsibility to members of the public". A study of 121 rural water supply projects in 49 countries by Narayan (1993, in Pretty, 1995) revealed that though most of these referred to community participation, only 21 percent scored high on what Pretty terms 'interactive participation'.

The British Columbia Round Table on the Environment and Economy (BCRTEE, 1994) presents a very similar spectrum to those described in Section 2.5 above, and suggests that moving from one level to the next involves the following:

- Increasing levels of interaction.
- Increasing intensity of public involvement.
- Increasing commitment of all role-players.
- Increasing cost and time.
- (On behalf of the public) increasing expectations, and increasing influence.

Clearly, choosing a level of participation involves trade-offs for those initiating, funding and participating in, participatory processes – thus both government and the governed. Recommendations for the choice of a level within the participatory spectrum reflect their author's bias toward pragmatic or ethical-democratic motives for the use of participation. Those favouring a more pragmatic perspective suggest matching the level of participation to 'intentions', primarily the intentions of government. These intentions must be matched to the nature of the problem under consideration – usually determined by the level of controversy (less controversial decisions require less public involvement) and the need for acceptability versus quality of a decision (with the assumption being that greater public involvement sacrifices quality in order to achieve acceptability) (Thomas, 1995).

Those authors leaning toward more ethical or democratic motives suggest that only the more active (interactive, empowering) levels of participation can ever achieve any real benefits, for either government or the public, and are also the only processes worthy of the term 'participation', dismissing all levels below these as 'tokenism'.

A more moderate contention (e.g. IAP2) is that all levels do have their purpose, given the appropriate circumstances, but that achieving the more valuable benefits of participation for natural resource management and environmental decision-making (such as ownership, commitment to implementation, and the attainment of wise, equitable decisions) will only be possible in the more active, power-sharing levels of the spectrum.

Holmes and Scoones (2000) have identified a set of features and principles characterising participatory initiatives directed at this end of the participatory spectrum. They surveyed a number of processes identified by a common commitment to deliberative and inclusive principles, thus forming part of a group of initiatives they term DIPs (Deliberative and Inclusive Processes).

DIPs share a number of features (Holmes and Scoones, 2000):

Deliberation:

- The process involves and requires social interaction.
- Discussion and debate occurs, therefore there is a dependence of the process on language.
- Participants are assumed to, at least initially, hold different views, and the process requires that these are respected.
- The design of processes is intended to develop a reflective capacity enabling participants to assess and re-assess their views. It is assumed that the process of deliberation both can and should lead to a transformation of participants' values and preferences.
- The process of deliberation and interaction itself is often seen to contain value over and above the decision outcome.
- Participants are expected to commit to resolving problems through dialogue aimed at mutual understanding, regardless of whether consensus is also sought (London, 1995).

- Participants aim for win-win outcomes (Pellow, 1999).
- Though the ultimate goal is usually to reach a decision, this involves a process of "unhurried, reflective and reasonably open-ended discussion" (Holmes and Scoones, 2000, p. 9).

Inclusivity:

- All whose interests may be affected have the opportunity to participate.
- The concept of inclusivity can also extend to process elements, including the agendas participants are allowed to discuss (Bloomfield *et al.*, 1998).

In addition to deliberation and inclusion, Holmes and Scoones (2000) identify other elements frequently shared by more active participatory initiatives:

- Incorporation of the widest possible range of interests;
- Focusing on the future and on common ground;
- Working in small groups;
- Urging full attendance and participation, and seeking public commitments to action (Selman and Parker, 1997).

Similarly, Pretty (1995) categorises more active participatory techniques as those employing 'systems of learning and action', and thus promoting cumulative learning and the incorporation of multiple stakeholder perspectives: "a central objective is to seek diversity, rather than characterize complexity in terms of average values" (Pretty, 1995 p. 1253).

Renn *et al.* (1995b) use the term 'discourse' to describe the style of participatory processes that they believe to be appropriate for handling environmental decisions. 'Discourse' implies that there is equality among participants, that peer review is used to verify understandings, and that processes are oriented toward "resolving conflicts in consensual rather than adversarial ways" (Renn *et al.*, 1995b p.3). This is similar to Holmes and Scoones' criteria of 'deliberation'.

There is thus widespread agreement amongst those advocating the ethical-democratic benefits of participation that successful participation is interactive, reflective, inclusive and consensual, and has the potential to change participants' values and preferences. A theoretical basis for these assertions is explored in the next section, followed by a discussion of the major criticisms these processes and theories have attracted.

2.7 Habermas and Communicative Rationality: A theoretical basis for deliberative and inclusive processes

Holmes and Scoones (2000) suggest that most DIPs have a theoretical origin, at least implicitly, in Jurgen Habermas's ideas of 'communicative rationality/action', though explicit use of Habermas's ideas is more prevalent in developed countries of the North. Similarly, Renn *et al.* (1995b) attribute much of the basis of participatory processes using 'discourse' to Habermas's influence.

It is Habermas's (1987 in Holmes and Scoones, 2000) assertion that adherence to procedural criteria, as opposed to scientific rationality (i.e. in which knowledge is created empirically, or through application of the scientific method) can enable effective and just decisions in the public interest. These procedural criteria are those enabling what he terms 'ideal free speech', i.e. in which interactions between participants are egalitarian, uncoerced, competent and free from delusion, deception, power and strategy (Dryzek, 1993; Smith and Wales, 1999). Participants agree to concur with positions they cannot refute (Tewdwr-Jones and Allmendinger 1998).

Communicative rationality results in interaction in which the goals and plans of action of different actors are negotiated and co-ordinated through discussion, which is oriented toward reaching a shared understanding (Habermas, 1984). This 'communicative action' is directly in contrast to 'strategic action'. Strategic action is oriented towards success. Using strategic rationality the individual manipulates interactions toward personal goals, by seeking to influence the decisions and actions of others in order to maximise their own interests (Groot and Marleveld, 2000). Communicative action is instead defined by individuals employing actions aimed not at their own success but at reaching understanding (Habermas, 1981 in Smith and Wales, 1999).

Communicative action, under the conditions of 'ideal free speech' is thus a means for a group to reach the most just and effective decision, as they have set aside their own goals and used the cumulative knowledge and perceptions of the group to reach a new, shared understanding of the problem and solution. Habermas claimed that such a 'self-reflective' methodology was able to overcome prejudices and achieve consensual decisions (MIT, 1994) and that the key to achieving such self-reflection was through participation in dialogue.

A further theoretical basis for deliberative participatory processes, similar to communicative rationality, is found in the philosophy of 'hermeneutics', which is briefly outlined below.

2.7.1 A hermeneutical approach to decision-making

Landman (2000) has suggested that decision-making for WRM could benefit from an approach grounded in the theory of 'hermeneutics'. Though Habermas presented his 'Critical Theory' (of which communicative rationality is a part) as an alternative to 'philosophical hermeneutics', in the contemporary usage of these two concepts and terms, hermeneutics could be argued to be an element of Critical Theory (Wikipedia, 2005). Hermeneutics, like communicative rationality, is concerned with generating 'understanding'. "Theory is developed through a continuous movement between pre-existing interpretive frameworks, both theoretical and popular, and the data of observation, collected during both intentional observation and everyday life" (Ezzy, 2002 p. 25).

Applied to the context of human social interaction, a hermeneutic approach seeks to gain understanding through engaging the viewpoints of others: "interpretation involves an ongoing circular process of moving between one's own perspective and the perspective of the other person" (Ezzy, 2002, p. 26). Landman (2000) recommends that the key to the resolution of multi-dimensional and contested decisions (such as occur in South African WRM) is for stakeholders to engage each other's knowledge and views in this way. Reaching agreement in a participatory decision-making process thus requires that participants are open and willing to change their views through exposure to other's perspectives. Such a requirement essentially introduces the same norms for individual attitudes and behaviour within decision-making groups as 'communicative rationality'.

2.8 Criticisms of deliberative, inclusive and consensus-seeking processes

Most criticisms of DIPs, or the more active range of participatory processes, have been directed at their theoretical basis – particularly 'communicative rationality' and the pursuit of consensus as a decision outcome.

2.8.1 Criticisms of Communicative Rationality

Jurgen Habermas's theories have faced a number of criticisms, particularly for a naivety about power relations (Cochrane, 1996). 'Ideal free speech' requires all participants to "understand the subject and information under discussion, engage in effective debate, act in a completely open and honest manner, and in the face of a 'better' argument move toward consensus" (Holmes and Scoones, 2000 p. 31). These are all requirements that in practice are difficult to meet. Violation of these assumptions is most problematic when large power gradients exist between participating groups. Though proponents of these ideas argue that through the deliberative process, power bases can shift as new relationships of collaboration and trust are formed (Healey, 1997 in Holmes and Scoones, 2000), it is argued that this shift will be minimal relative to starting power differentials.

Arguments fundamentally seem to revolve around the possibility of forcing people to employ (Habermas's) communicative over strategic action. For example, it is argued that it is not possible to control the individual thought processes of participants, or to ensure that they act in an open, honest manner at all times (Tewdwr-Jones and Allmendinger, 1998). Certain combinations of sectors will often share viewpoints and will form alliances within debates. People can, when using strategic rationality and action, purposefully misrepresent themselves.

In my view, the question then ultimately becomes one of whether it is possible, through the structure, facilitation and context of a particular participatory process, to encourage participants to seek understanding for themselves and others as a necessary pre-requisite for ultimately achieving personal gain. This possibility and probability will be discussed further

in a conclusion to this discussion of criticisms of DIPs and their theoretical basis (Section 2.8.3).

2.8.2 Criticisms of consensus

One of the basic assumptions of Communicative Rationality, and thus many of the participatory approaches implicitly or explicitly using these ideas, is that a deliberative approach can lead to consensus (Tewdwr-Jones and Allmendinger, 1998). Participants are required to not only respect others' viewpoints, but to engage them, and thereby move towards a shared preference for a solution (Rossi, 1997). Criticisms of consensus as a goal of participation are of two forms – firstly, whether consensus is possible, given the huge variety of values and viewpoints involved, and secondly whether consensus is desirable.

Many argue that consensus is only likely in the smallest groups (Rossi, 1997). However, small group size is also a feature of the majority of active or interactive participatory initiatives. Others also point out that consensus as an outcome does not have to, and seldom does, refer to a unanimous agreement (Kaner *et al.*, 1996). 'Gradients' of agreement exist, and a particular 'level' or strength of agreement within a group can be used as a decision rule (Kaner *et al.*, 1996).

The desirability of consensus is a source of disagreement and debate even within deliberative democratic theory (i.e. amongst those proposing that deliberative, inclusive participatory processes are a strategy for achieving participatory democracy). As Smith and Wales (1999 p. 306) point out: for some, consensus "acts as a regulative ideal of deliberation; for others, the stress on this ideal can act as a barrier to critical dialogue – more powerful interests are liable to dominate the agenda and the definition of consensus."

Again, these concerns relate mainly to the issue of power imbalances. It is argued that there are winners and losers, even in apparently consensual solutions, and an emphasis on reaching consensus may "silence rather than give voice to those already marginalised" (Holmes and Scoones, 2000 p. 33), an event which is "particularly likely where values and interests of some parties are subordinated, knowingly or unknowingly, to those of more powerful, articulate, or persuasive actors in the process". It is also argued that where there is strong pressure to reach consensus this may inhibit the argumentative process, and in this way favour the maintenance of a status quo. As an alternative to 'consensus theories', 'conflict theories' propose that participation should facilitate expansion of the scope of conflict and thereby serve the interests of social change (Renn *et al.*, 1995b).

Holmes and Scoones (2000 p. 33) cite evidence by Pellow (1999) in which participants were effectively intimidated through peer pressure to "produce a 'consensus' that was largely rhetorical, or based more on grudging compromise than communicative rationality". Similarly, Smith and Wales (1999 p. 302), in their study of a form of active participation known as Citizen's Juries, report that "questions have been raised by some jurors as to

whether, on occasion, moderators push for consensus amongst the jurors at the expense of allowing participants to understand and work through their differences".

Differences, conflict and learning

However, others (e.g. Kaner *et al.*, 1996; Landman, 2000; Dorcey, 1991; Renn *et al.*, 1995b) argue that examples such as those described above arise from a misunderstanding of consensus – as a product rather than a process. Reaching true consensus relies on 'conflict' – or at least engaging differences, in views, interests and values, and learning from them. These authors all recognise a positive role for differences and even conflict in reaching wise and fair consensual decisions, provided this conflict is not destructive, to the process of building relationships and to an atmosphere of mutual respect.

For example, Dorcey (1991) suggests that an emphasis on 'reaching agreement' in participatory processes should not imply that there is no room for disagreement. Rather there is a need to learn from the disagreements that differing perspectives can generate. These differences, and the tension associated therewith, offer the potential to be used as a platform for mutual learning (Kasemir *et al.*, 1999 in Landman, 2000). This learning is achieved by strategies designed to make disagreements productive (Dorcey, 1991), while clarifying reasons for not agreeing, and attempting to avoid and rectify misunderstandings. However conflict must be constructive: "Forums are enriched by diversity and eclecticism, but only if they also include incentives and capability to pursue agreement and cope peacefully with the tensions and turbulence of conflict" (Dorcey, 1991 p. 579).

Fixed versus coevolving preferences

A positive role for 'differences' is only possible if participants' initially conflicting perceptions, demands or opinions, are able to change during the decision-making process, and thus converge on a shared solution. Costanza and Folke (1997) propose that this 'coevolution of stakeholder preferences' should occur through a process of 'joint value formation by discussion'.

The potential for transformation of the values and preferences of citizens or decision makers is a central belief of 'deliberative democracy'. This belief is in direct contrast with much contemporary liberal theory, which holds that "values and preferences are given and immutable and the role of political authorities is simply to aggregate individual preferences" (Smith and Wales, 1999 p. 299).

Relationship-building

Concerns about conflict relate in part to its potential negative effect on relationships. The possibility of co-evolving preferences is also likely to be affected by the quality of relationships among those initially holding different views. It is the view of several authors (Fisher and Brown, 1988; Moore, 1996; Yaffee, 1998; Tuler and Webler, 1999; Pretty and Ward, 2001) that successful participatory processes should improve relationships between participating sectors, and between public and government, thus creating an environment conducive to cooperation – in both decision-making and the implementation of policy and decisions. The style of interaction among all participants, including government and specialists, is crucial to the quality of these relationships. Confrontational interaction, where little respect is shown for others or their viewpoints, is likely to exacerbate conflict, deter agreement or cooperation, and ultimately destroy relationships between participants.

2.8.3 Conflict and consensus: A position for this thesis

Though various authors are able to counter the possibility and desirability of consensus, and the likelihood of participants employing communicative rationality, in several ways, the problems of natural and common property resource management systems call for some form of stakeholder cooperation and therefore tangible agreement on shared goals, values and actions.

Fortunately such systems also facilitate cooperation, due to the interdependence of their stakeholders (i.e. either because of relationships of causality in the natural world, or because of the rules governing a particular decision, imposed by some kind of authority or referee). In such situations, interdependent stakeholders can best ensure that their own needs are met by first satisfying the needs of others (Susskind and Cruikshank, 1987). In order to reach agreement it is important that participants stress the cooperative and not just competitive aspects of their relationship (Susskind and Cruikshank, 1987); 'communicative rationality', aimed at understanding others, not defeating them, is a potential means to achieving this.

In this thesis I have therefore chosen to largely remain outside of this debate, by taking a moderate, pragmatic view toward the issue of consensus:

- As referring to a process not only a product (i.e. unanimity or some pre-determined level of agreement).
- As being challenged in particular by the existence of power imbalances, which must therefore explicitly be recognised, and prioritised as an issue requiring address, both inside, and outside, the participatory process.
- As having potential for misuse or abuse, when a requirement for 'consensus' is invoked as a motive to suppress the expression of differences and conflict, or to reach a 'quick' decision that doesn't truly reflect the will of the group.

Within this moderate view, facilitators of participatory processes can potentially stimulate the employment of 'communicative rationality' by: exposing participants' interdependence;

creating an atmosphere of mutual learning not debate; using behavioural rules to ensure mutual respect and prevent antagonistic and confrontational interactions, which impair relationships and are unlikely to lead to cooperative agreement or action.

Given the calls for 'deeper' participation, and the theoretical debates around deliberation, consensus and power imbalances, the following section addresses the translation of these theories and assertions into practical guidelines for conducting participatory processes.

2.9 Guidelines for conducting and facilitating participatory processes

Discussions of the process of participatory decision-making can be found in a number of diverse sources: the social and political sciences, public management (Thomas, 1995), natural resource management (Wondolleck and Yaffee, 2000), environmental economics (Costanza and Folke, 1997), organisational and business management (e.g. Kaner *et al.*, 1996), and finally the negotiation and conflict management literature (e.g. Susskind and Cruikshank, 1987; Fisher and Ury, 1983).

In a review of the literature proposing principles underlying "good" participatory processes, Tuler and Webler (1999) conclude that little consensus exists on what these principles are. Though most agree that the principles applied should be determined to some extent by the context of a particular situation, there is also little guidance on how this should, or could, be done.

Tuler and Webler's (1999) review further indicated that there have been few attempts to derive principles from theory, and even fewer to derive principles directly from stakeholder experiences. In furthering a 'theory of public participation' there has thus far been excellent input from practitioners, a little from the theorists and almost none from the participants. The design of this research was, in part, inspired by the recognition of the vital importance of a stakeholder perspective, and the opportunity to access the perspectives of stakeholders in South African WRM, for whom participatory processes are a completely new experience.

Some contributions of theory and theorists have been introduced and briefly discussed in the form of communicative rationality and hermeneutics. In addition, three examples of practitioner-derived principles will be presented, followed by a focus on available stakeholder-derived principles.

2.9.1 Practitioner-derived principles

One example of practitioner-derived principles is provided by the IAP2, in what they refer to as "core values" for the practice of public participation (IAP2, 2004). These are as follows:

- The public should have a say in decisions about actions that affect their lives.

- Public participation includes the promise that the public's contribution will influence the decision.
- The public participation process communicates the interests and meets the process needs of all participants.
- The public participation process seeks out and facilitates the involvement of those potentially affected.
- The public participation process involves participants in defining how they participate.
- The public participation process provides participants with the information they need to participate in a meaningful way.
- The public participation process communicates to participants how their input affected the decision.

Buchy and Race (2001) suggest the following 'principles of good practice' (from Buchy *et al.*, 1999) for community participation in natural resource management, and emphasise that the role of 'attitudes' among implementing agents is as important as the use of specific processes:

- Commitment and clarity.
  "The agency seeking people's involvement has to be very specific at the outset about what it is prepared to achieve to avoid misleading the public and raising false expectations" (p. 297). In addition the agency's staff must be committed to the process, and must thus be provided with adequate resources.
- Time and group dynamics.
  Time allowed for the process must be appropriate to the process and outcomes intended, and must allow for 'stages' of group decision-making.
- Representativity.
  The process of selecting stakeholders should be open and transparent. In addition, the design of the process should not exclude certain groups, through the choice of venues and times for meetings. Attention must be paid to the role that power relationships between stakeholders may play in determining outcomes.
- Transfer of skills.
  Although learning may happen 'organically' through communities' participation in the process, "many more specialised skills may need to be transferred specifically" (p. 298).

Kaner *et al.* (1996) present guidelines directed at the context of organisational and business management, and describe in detail a process, with accompanying principles and facilitation techniques, for facilitating the process of group decision-making. They emphasise the role of the facilitator, who is responsible for enabling a group's progress through various stages of interaction and agreement (gathering diverse points of view, building a shared framework of understanding, inclusive solutions, reaching closure), each characterised by different processes, outcomes, and emotions. There is a central focus on social interaction between group members, an emphasis on the role of differences, and the need to embrace and learn from diversity, despite the discomfort this may entail.

Skilled facilitation is based on certain 'core values':

- Full participation:
    - All participants are encouraged to contribute and to speak openly.
- Mutual understanding:
    - In order to reach agreement, participants "need to understand and accept the legitimacy of one another's needs and goals" (p. 24).
- Inclusive solutions:
    - These can only result from the integration of diverse perspectives held within the group, and gain wisdom from this diversity. "As the Quakers say, "everybody has a piece of the truth"" (p. 24).
- Shared responsibility:
    - Participants "feel a strong sense of responsibility for creating and developing sustainable agreements" as they realise they must be able and willing to implement proposals they have endorsed. "This contrasts sharply with the conventional assumption that everyone will be held accountable for the consequences of decisions made by a few key people" (p. 24).

2.9.2 Stakeholder-derived guidelines

In recognition of the importance of stakeholder-derived guidelines, this research has been designed to emphasise the perspectives of stakeholders in South African WRM. Three sets of guidelines sourced from stakeholders in different environmental policymaking contexts elsewhere in the world are presented here:

The Round Tables of Canada (participatory decision-making groups for a variety of different governance portfolios) developed "10 guiding principles of consensus processes" (National Round Table on the Environment and the Economy, 1993), which are, in essence, stakeholder-derived:

- Purpose driven
    - People need a reason to participate in the process.
- Inclusive not exclusive
    - All parties with a significant interest in the issue should be involved in the consensus process.
- Voluntary participation
    - The parties who are affected or interested participate voluntarily.
- Self design
    - The parties design the consensus process.
- Flexibility
    - Flexibility should be designed into the process.
- Equal opportunity
    - All parties must have equal access to relevant information and the opportunity to participate effectively throughout the process.
- Respect for diverse interests

    - Acceptance of the diverse values, interests and knowledge of the parties involved in the consensus process is essential.
- Accountability
    - The parties are accountable both to their constituencies and to the process that they have agreed to establish.
- Time limits
    - Realistic deadlines are necessary throughout the process.
- Implementation
    - Commitment to implementation and effective monitoring are essential parts of any agreement.

Other examples of stakeholder-derived guidelines are provided by Tuler and Webler (1999), McCool and Guthrie (2001) and Brueckner (2002):

Tuler and Webler (1999) derived the following categories of principles from stakeholders participating in a forest policymaking process in New England, USA. Their study focused on asking stakeholders about their perceptions of a 'good' process, rather than outcome. The categories were as follows:

- Access to the process (opportunity to participate).
- Power to influence process and outcome.
- Access to information.
- Structural characteristics to promote constructive interactions.
- Facilitation of constructive personal behaviours.
- Adequate analysis.
- Enabling of social conditions necessary for future processes. For example:
    - Process should not fuel conflict and therefore jeopardise future interaction.
    - Process should build better relationships among groups.
    - Process should promote a 'sense of place'.

McCool and Guthrie (2001) conducted a study of two ecosystem-based planning projects in Montana, USA and present the following stakeholder-sourced principles for product and process:

Product criteria

- Plan written and implemented.
- Plan socially and politically acceptable.

Process criteria

- Learning
    - Content – learning about ecosystem-based management, learning about legal and policy issues, learning about the values, beliefs and interests of others.
    - Process – communicating with each other and interpersonal learning.
- Responsibility
    - Managers responsive to public input.
    - Sense of ownership is created.
- Relationship building

    - Between managers and public, scientists and public.
    - Between members of public.
    - Success in relationship-building indicated by participants being better able to listen to other perspectives, thus also by perception of having been heard.
- Representation of interests

Brueckner (2002) conducted a similar study to derive principles from participants in a Regional Forest Agreement process in Western Australia. The resulting principles were:

- Active involvement of all stakeholders.
- Trust, truth and honesty.
- Openness and transparency.
- Best data and knowledge.
- Independent process facilitation.
- Open-ended and unconstrained.

In all three studies stakeholders placed an emphasis on the value and role of:

- Social norms and behaviour; relationships
    - E.g. Trust, truth and honesty, constructive personal behaviours, constructive interaction, building better relationships, and not fuelling conflict.
- Participants' power and influence
    - E.g. Access to process, power to influence process and outcome of participation, responsiveness of managers to participants inputs.
- Good technical support
    - E.g. Access to information, best data and knowledge, adequate analysis.

2.9.3 The role of context and the need for context-sensitive local guidelines

Two of the authors presenting stakeholder-derived guidelines for participation, Tuler and Webler (1999) and Brueckner (2002), also emphasise the potentially important role of contextual and historical factors in determining the principles of a 'good' participatory process. For example, the long history of conflict and mistrust in forest planning processes in Western Australia was reflected in the emphasis participants in this study placed on issues of trust and openness.

Tuler and Webler (1999), in concluding their research on 'best practice' principles for participation, "raise the question of external validity" (p. 451). Are process norms, established through stakeholder surveys, a reflection of "a social consensus on fundamental democratic values" or are they "much more contextualised"? Alternatively "there are fundamental norms but … operationalisation of those norms may be contextually or historically situated". Brueckner (2002 p. 2) in turn states the "need for a more history-specific and context-specific sensitivity in public policy process design and delivery".

All of these concerns suggest that participatory processes, and the principles and guidelines for conducting them, need to be tailor-made to local conditions. In my opinion, the potentially significant role played by context in determining the outcomes of participation raises especial concern over the application of available guidelines and principles to South African and other 'Third World' contexts. If little agreement exists on 'best practice' principles for participation, and the majority of principles are derived from practitioners (Tuler and Webler, 1999), the majority of whom operate in First World contexts, then direct application of such guidelines may be inappropriate, yielding unsatisfactory and even counterproductive results, or may only be appropriate given certain conditions or refinements. This is of particular concern given that a major part of the debate among public participation theorists relates to the issue of power imbalances – one of the most central challenges of the South African WRM context.

Guidelines have been prepared by DWAF to assist practitioners and officials in implementing the NWA's requirements for participation in South African WRM; however these are largely insensitive to context, and generally draw their advice from international ('First World'; practitioner-derived) sources. (As these guidelines form part of the policy context for the processes examined in this study these guidelines will be discussed in detail in Chapter 3; Section 3.7).

Given the concerns about contextual sensitivity expressed above, the approach taken in this thesis will not be to evaluate South African processes relative to international (or even the currently available South African) guidelines, but instead to derive an original set of guidelines, based on the experiences of case studies, and examination and consideration of local context and the perspectives of local role-players. These will then be interpreted in the light of existing international theory and guidelines, and expanded on using supporting literature.

The concept of evaluation, and the chosen approach to evaluating participatory processes in this research, will be discussed next.

2.10 Evaluating participatory processes

The subject of evaluation has received little attention, relative to other aspects of participation (Renn *et al.*, 1995a p. xiv), and "a systematic framework for evaluation is completely absent, on any but the most abstract level". The concept of evaluation is inherently problematic – particularly if evaluation is oriented exclusively around the perspectives of the various role-players (Renn *et al.*, 1995). Subject-centred evaluation will produce different results depending on the subject (e.g. government, different stakeholder sectors), and, as the outcomes of a process are valued differently by different role-players, can always be directed to produce a negative result if it is oriented around the relative 'loser' in a particular process.

Ultimately, evaluation can only be conducted relative to 'purpose' – it would be "easy to agree on a method of evaluation" if there were "agreement on the means and ends of participation" (Renn *et al.*, 1995b p. 7). As is apparent from the spectra of participatory purpose and outcome described in Section 2.5 no such agreement exists for 'participation' in general, though this could conceivably be reached for a particular process or context, and evaluation conducted to assess the achievement of the process's original purpose. Ideally this evaluation framework would be agreed to by all participants, including government, prior to the process.

Renn *et al.* (1995b) suggest that it is possible to find principles of participation of value to both governments and participants, and that fairness and competence are two such principles widely agreed on. Susskind and Cruikshank (1987) suggest four criteria for evaluating the success of a negotiated settlement as a participatory decision outcome: **fairness** (all interests are treated equally), **wisdom** (a competent decision based on all available relevant information, which in implementation achieves the goals it intended), **stability** (decision will not be opposed and thereby negated in the near future) and **efficiency**. They also point out that it is far more important that a process is perceived as fair by the parties involved than for example by an abstract analyst, and that a process is most likely to be perceived as fair when it is open to continuous modification by the participants.

2.11 Chosen approach to evaluating participatory processes in the context of this thesis

As comprehensive evaluation of a particular participatory process is only possible relative to its purpose, a framework for evaluating participation in the context of South African water resource management was designed for use in this thesis, based on the likely intended outcomes of this participation. The outcomes of interest can be found in the vision of the NWA and the Constitution i.e. **equity**, **sustainability** and **efficiency** (and the **process** and **product** outcomes associated with these ultimate goals) and the attainment of democratic ideals such as transparency, legitimacy, and popular support. Motives of particular relevance to the South African context include the redress of past imbalances, empowerment of disadvantaged and marginalised stakeholders, and the redistribution of power and resources in society.

The intended framework for evaluation is presented in Table 2.1, which identifies various 'product' and 'process' outcomes which ultimately serve the ends of equity, sustainability and efficiency in South African WRM. These are derived from the potential benefits of participation discussed in this chapter, and the causal links between various product and process outcomes and higher level goals. Another aspect of evaluation is the level of power-sharing or stakeholder influence intended and achieved through participatory processes. The intentions of policy in this regard are not as clear, and this will be discussed further in Section 3.8.

Table 2.1: Chosen framework for evaluating participatory processes in the context of this thesis

	Equity	**Sustainability**	**Efficiency**
Product outcome	Fair decision (all interests treated equally).	Wise decision (informed and implementable).	Stable decision (not contested).
Process outcome	Inclusivity - Access to process. - Access to information. - Ability to contribute. Capacity building - Empowerment of marginalised and disadvantaged groups.	Sense of ownership. Commitment to implementation. Capacity building - Stakeholder knowledge and understanding of policy, resource and resource management.	Relationships. Networks. Reduced levels of conflict between stakeholder sectors, and with government. Capacity building - Ability to reach agreement, resolve conflict through negotiation.

The chosen criteria for evaluation are therefore:

- LEVEL OF PARTICIPATION
- PRODUCT OUTCOME
    - Decision.
        - Wise?
        - Fair?
        - Stable?
- PROCESS OUTCOME
    - Sense of ownership.
    - Capacity building/learning.
        - Policy.
        - Water resource and resource management.
        - Others' perspectives.
    - Networks and relationships.
    - Inclusivity.
        - Access to process.

- Access to information.
- Ability to contribute.

2.12 Conclusion: theoretical challenges to the design of successful participatory processes

In summary, stakeholder participation in natural resource management has a number of potential benefits – both pragmatic and democratic. These include: more **informed and equitable decisions**; a **sense of ownership** by participants of decision outcomes, with subsequent commitment to their implementation; improved **relationships** between stakeholders and government and with each other, leading to greater **cooperation** in resource management. However, 'participation' as a concept is poorly defined, and a range of procedural interpretations of the requirement for 'public participation' in decision-making processes therefore exists. Several authors have attempted to classify this diversity in the form of spectra, involving levels implied to be 'depths' of participation. Those advocating the more democratic benefits of participation focus on 'deeper' levels (placing greater influence and power in the hands of stakeholders) as being the preferred means and definition of true 'participation', serving the interests of all role-players. Such deliberative and inclusive processes often have a basis in Habermas's theory of 'communicative rationality' and utilise principles such as: a reliance on **social interaction**, discussion and debate; a focus on reaching **mutual understanding**, and ultimately **consensus**; a belief that the value of the process often exceeds the value of the outcome.

The issue of consensus and 'communicative rationality' is controversial, and divides even those proposing the deeper, deliberative levels of participation. Entering into this debate is beyond the scope of this thesis. I will therefore adopt a pragmatic stance, accepting that agreement and cooperation are vital to the equitable and sustainable management of a shared natural resource, and that this imperative provides incentives for stakeholders to engage meaningfully in consensual decision-making processes.

The synthesis provided by this framework highlighted some of the most serious theoretical challenges to successful public participation:

- The potential for **power imbalances** between stakeholders to lead to inequitable participatory processes and outcomes.
- The range and **vagueness of definitions and perceptions of what constitutes 'participation'**.
- The role of **context** in influencing the outcomes of participatory processes.
- The danger of unfulfilled **expectations**, **opposition** and **conflict** resulting from unsuccessful participatory processes.

The following chapter will highlight the practical challenges facing implementation of participation in the context of South Africa's new water policy.

CHAPTER 3:

POLICY CONTEXT FOR PUBLIC PARTICIPATION IN SOUTH AFRICAN WATER RESOURCE MANAGEMENT

3.1 Introduction

The passing of the White Paper on a National Water Policy in 1997, and the National Water Act in 1998, provided the stimulus for, and backdrop to, this research. Both past and present water resource management policy and practice have implications for participatory water resource management in South Africa at this time. Insight into this context is crucial to understanding the perceptions and priorities of both the historically advantaged, and disadvantaged, stakeholders, as well as specialists and government officials, as they struggle to engage a new policy paradigm for the management of a scarce and contested resource, while continuing to deal with the legacy of the past. It is this legacy that provides many of the issues which stakeholders currently experience as most crucial, and which they therefore bring to participatory processes.

This chapter will begin by discussing the most important policy changes of relevance to this research, and will then focus in further detail on the NWA's requirements for participation and the guidelines provided for achieving these. Finally, the most important challenges that this context provides to implementing participatory water resource management in South Africa will be discussed.

3.2 The vision of the future, and the legacy of the past

The passing of the National Water Act in 1998 brought about a "radical transformation" in the legal context for water resource management in South Africa (Stein, 2002 p. 116). The most significant changes of interest to this research are as follows:

- A fundamentally new approach to management of both the use and protection of water resources. Within this arise two points of relevance to this study: (1) the decentralisation of resource management decision-making and the participation of

stakeholders therein [NWA Ch. 7, 8]; (2) the concept of the 'Reserve' and the introduction of proactive, adaptive and integrated resource management [NWA Ch. 3];
- A complete revision of the principles and laws governing rights of access to water resources, effectively resulting in the opportunity for a fundamental redistribution of rights, costs and benefits of water resource use [NWA Ch. 4].

The following discussion will thus be structured around four main themes:
- Resource use: rights of access to water resources.
- Resource protection: the Ecological Reserve as a means to a Desired Future State through Adaptive Resource Management.
- Decentralisation and devolution of management functions through the establishment of 19 Catchment Management Agencies for 19 Water Management Areas.
- Public and stakeholder participation in all aspects of resource management and decision-making.

The establishment of CMAs and the determination of the Ecological Reserve provided the focus of participation in the two case studies used to investigate current approaches to participation being used to implement the NWA. The detailed requirements of these processes will be discussed further within the chapters dealing with these case studies (Chapters 6 and 7).

3.3 Resource use: Rights of access

By far the most controversial aspect of the five-year policy review process was the transformation of the previous system of allocating rights to use water resources (Palmer *et al.*, 2000). The need for redistribution of access in post-apartheid South Africa provided the political will for initiating such a fundamental review (De Coning and Sherwill, 2004). The problem of removing historical rights within the constraints of the new Constitution focused the attention of a team of legal experts, and appears to have provided the stimulus for the majority of public inputs into the law review process (Palmer, pers. comm.).

The result of this controversial and lengthy review has been a National Water Act that radically changes the rules governing the use of water resources, and thus the positions from which stakeholders now need to negotiate their access to the resource. Of all the aspects of the new policy this is the one of most direct concern to the majority of stakeholders due to its easily discernable impacts on livelihoods. These issues are thus likely to dominate any 'dialogue space' that is given to stakeholders within participatory processes.

3.3.1 The past: Riparian rights and private water

The old Water Act (No 54 of 1956) linked water rights to land rights, resulting in inequitable access to water resources, which followed the apartheid-generated pattern of inequitable access

to land (Stein, 2002). In addition, the previous policy allowed for 'ownership' of water resources by making the distinction between 'public' and 'private' water. Landowners were effectively given ownership of groundwater and surface water flowing across their properties (Davies and Day, 1998). Access to 'public water' was determined by a system of "riparian rights" – these guaranteed access to 'public water' for those owning land riparian to a stream, with abstraction generally being unlimited except by intervention of a Water Court ruling, or regulation by an irrigation board or Government Water Control Area.

3.3.2 The future: The 'Reserve' and water use licensing

The new Water Act has resulted in a severing of this connection between land and water rights. 'Riparian rights' and the distinction between public and private water fall away – all water resources are now an "indivisible natural asset" under the custodianship of national government. There is now "no ownership of water but only a right (for environmental and basic human needs) or an authorisation for its use" (DWAF, 1997 p. 34). The single inalienable right of access provided by the new policy is that of the 'Reserve', which is composed of a 'Basic Human Needs Reserve' and an 'Ecological Reserve'. The Basic Human Needs Reserve includes the water required for drinking, food preparation and personal hygiene. The Ecological Reserve refers to the quality, quantity and assurance of water required to protect the structure and functioning of aquatic ecosystems, so as to secure ecologically sustainable development and utilization of the resource (DWAF, 1999a). The role and significance of the Ecological Reserve within the resource management process will be discussed further in the next section (Section 3.4).

The quantity and quality of water which remains in excess of the Reserve is considered to be the 'total allocatable resource', which may be distributed amongst competing users guided by the objectives of social equity and economic efficiency (DWAF, 1997). Unlike the previous allocations linked to land ownership, allocations under the NWA, in the form of 'licences' or 'water use authorisations', will not be permanent, but for a 'reasonable period', and may be traded between users with Ministerial consent. This introduces the potential for ongoing, adaptive adjustment to overall water resource use in response to changing conditions and emerging knowledge.

In principle the process of issuing licences offers a means toward achieving the re-allocation of water within a catchment. In practice, however, the requirement to issue licences is restricted by the provision (Section 22) that water may be used without a licence if it is an "existing lawful use" i.e. was authorised under earlier legislation, and took place at any time between October 1996 and September 1998. This effectively means that most existing water use has remained legal despite the passage of the new legislation (but will be subject to phased change in the future). Under the Act compulsory licensing may be called for at any time, and this procedure is to be used in areas which are, or soon will be, under 'water stress', or "where it is necessary to review prevailing water use to achieve equity of access to water" (NWA Ch. 4, part 8). Where the water resource is already considered to be over-allocated no licences will

be issued (therefore no new allocations can be made) until the Reserve has been determined, a process which can take up to two years to complete (DWAF, 1999a) and even longer to be signed into effect.

Thus the change in policy has created a climate of both hope and fear: hope amongst those denied access to water resources in the past, and apprehension amongst those 'historically advantaged', and who continue to enjoy this access in the present. The potentially long period of transition from old to new allocation systems will most likely result in confusion and uncertainty for both.

3.4 Environmental protection through proactive, integrated and adaptive resource management

Though the need to redress the inequities of the past was a driving force in the development of the new water policy, strong imperatives also existed to address the issue of resource protection (MacKay, 2003). The previous water law had placed South Africa's water resources on an unsustainable trajectory (Davies and Day, 1998), with its reactive and supply-oriented approach to management.

Under the old water law aquatic ecosystems had no 'right' to the water required to maintain their functioning – as a result several rivers were under threat, and many have even lost perenniality, as a result of ever-increasing consumptive use (Davies and Day, 1998). Now the 'Reserve' must be met before any allocation of resource quality or quantity may be made. The new legislation has thus effectively moved the natural environment from 'last' to 'first' in the 'queue for water rights'. However, this does not reflect an ecocentric approach to resource management or the prioritisation of conservation goals – the intention of the Ecological Reserve is to "maintain the ecological functions on which humans depend" (DWAF, 1997 p. 35).

3.4.1 Resource protection within an adaptive management cycle

Though the Ecological Reserve (hereafter referred to simply as the Reserve), both as a concept and a term, seems to have taken on the role in conversation and debate as *the* resource protection instrument of the new water law, in reality the Reserve merely forms part of a broader system of protection and management based on the concept of Adaptive Resource Management (ARM) and its local derivative Strategic Adaptive Management (SAM).

Adaptive Resource Management (ARM) (Holling, 1978; Walters, 1986) has been widely advocated over the last two decades as the model of choice for the management of natural resources (Rogers and Bestbier, 1997). ARM recognises that, contrary to previous widely-held perceptions of ecosystems as regulating toward some system-defined 'balance of nature',

ecosystems are in a continual state of flux. In addition, our understanding of ecosystem functioning is poor – thus effective management is that which can deal with the uncertainty of ever-changing ecosystems from an imperfect knowledge base (Walters and Holling, 1990). ARM is therefore an inductive process that uses planned interventions in nature to test hypotheses of ecosystem response to management, and thus 'learn-by-doing'. Under an ARM approach, resource management policies are viewed as 'experiments' from which managers can, and must, learn. Institutions can 'learn' as individuals do, therefore adaptive management is founded on social and institutional learning (Lee, 1993 in Berkes and Folke, 2000).

Strategic Adaptive Management (SAM) is a locally derived form of ARM (Rogers *et al.* 2000), which in addition to an adaptive approach linking management with research, has a focus on strategic planning which reflects societal goals. SAM is concerned with building partnerships between science, management and the greater society.

The WRM cycle (Figure 3.1) has been designed to reflect an ARM/SAM approach. It is goal-seeking/proactive – requiring agreement on a vision for the future of the resource (the 'desired future state'), and adaptive – it is an iterative cycle with an explicit phase of review and reflection. (Note: This conceptualisation is likely to have changed since, particularly the interpretation of RQOs and Reserve, but the features of importance to this discussion i.e. a goal-directed and adaptive process, remain.)

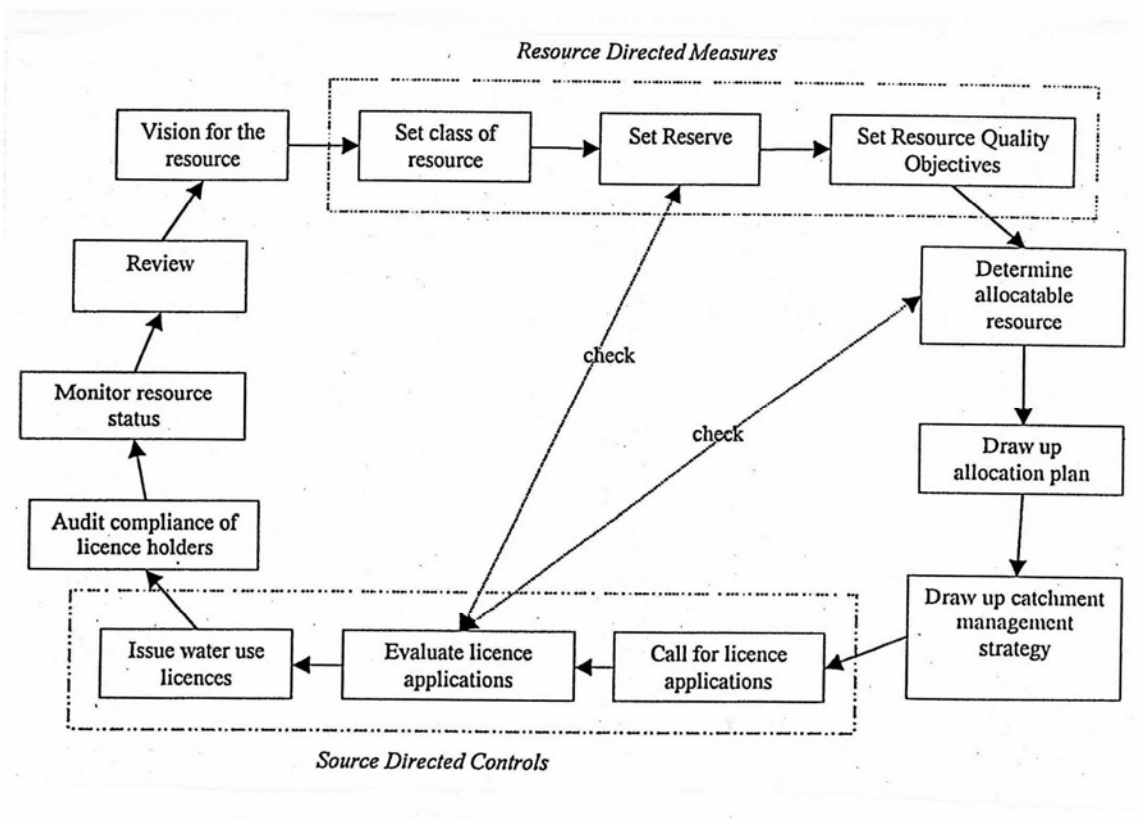

Figure 3.1: The Water Resource Management cycle (From DWAF, 1999a, p. IMI/2)

3.4.2 A vision for a Desired Future State, expressed as Ecological Management Classes, and interpreted as the Reserve

As is evident in Figure 3.1, determination of a vision for a resource precedes the setting of the Reserve. This vision, also referred to as a 'Desired Future State' (a term originally introduced by SAM (Rogers and Bestbier, 1997)), is the decision that sets both the aspirations and constraints for use of the resource. This is a decision which must be made with the participation of local stakeholders, who are required to "set a joint vision" for their resource (DWAF, 1999b p. 4).

The vision in turn will determine the choice between four Ecological Management Categories (EMC) that can be set for a river and its component reaches. These range from EMCs A to D (DWAF, 1999a), in order of increasing risk to, or decreasing levels of protection for, sensitive aquatic species and habitats.

Thus, determination of the Reserve is not purely a technical assessment of the minimum water quality and quantity required to maintain the present ecological status quo. Instead the Ecological Reserve is to be set at a level that reflects the degree of protection desired for a particular ecosystem. Developing a vision for the desired state of a water resource will require consideration and integration of the needs and values of all stakeholders for both the use and protection of the resource. The decision about a Desired Future State, and the Management Classes and Reserve, is a multi-criteria, distributive and value-based decision, with high levels of scientific uncertainty. The Reserve will be difficult to enforce and impossible to implement without stakeholder buy-in (Palmer *et al.*, 2000). This creates a strong imperative for such a decision to be participatory, and for this participation to be successful.

Arriving at operational goals for management based on broader social values will also require considerable input and involvement by specialists, ecological and engineering expertise. A major procedural element will concern the interaction of these specialists with resource users, government, and managers. Such interaction has little precedent in the history of water resource management in South Africa.

3.4.3 The water resource as an ecosystem

The Reserve and Class are not only about sustainability, but also offer a means to greater equity through a redistribution of the costs and benefits of resource use. An important mindshift in the new policy has been a change in conceptualisation of 'water resources' and what constitutes 'resource use' (MacKay, 2003). A water resource is now understood to refer to the entire aquatic ecosystem and not merely the water it contains (DWAF, 1999a). By contrast, under the old water law, resource management, and the consideration of costs and benefits of resource use, was entirely oriented around water as a commodity – though not as a commodity to be sold at a price related to its cost (Davies and Day, 1998; MacKay, 2003).

Other 'goods and services' provided by river ecosystems were thus not explicitly managed for, or factored into decision-making about water use. Irrigation water could thus be supplied very cheaply by externalising the costs of the lost goods and services provided by river ecosystems. These were of more value to people relying extensively on the direct use of natural resources – such as reeds, fish, indigenous fruits and medicinal plants – or to those for whom rivers have a vital cultural and religious significance not replicated by dams.

Management of water resources under the old Water Act was also not goal-directed, or integrated at a catchment scale – the majority of management actions were reactive upon consumer demands for increasing supply. This supply-oriented approach thus relied heavily upon technical and engineering solutions to the problems experienced by white-owned agriculture, business and industry (Mayet, unpubl.). The financial cost of these solutions was however largely borne by the state, with social and environmental costs seldom taken into account.

This legacy has implications for the style and content of participatory processes around the Reserve and allocation planning. It is likely that the supply-oriented past has shaped the perceptions of both current and future resource users, as to the true cost of water resource use and the potential for further supply-oriented intervention in the future, and they will bring these perceptions and preferences to the decision-making process. If resulting decisions are able to ensure the sustainability of future resource use, a new and shared understanding of the value of water resources, and the cost of their use, will need to be built. Achieving buy-in to the concept of a Reserve will be far from automatic. Many stakeholders have developed what has effectively been a government-sanctioned perception of the wastefulness of allowing rivers to reach the sea (MacKay, 2003).

3.5 Decentralisation of WRM decision-making

In order to make water resource management more responsive to local needs, the new water law is based on a policy of decentralisation and participation. Recognition of the need for integrated management, of a biophysically integrated resource, is reflected in the choice of river catchments as the appropriate scale at which this integration should take place.

Devolution of power to a local, catchment-delineated scale is to be achieved through the establishment of a Catchment Management Agency (CMA) for each of the 19 Water Management Areas (WMA) into which South Africa has been divided. These "coincide either with natural river catchments, groups of catchments, sub-catchments or areas with linked supply systems with common socio-economic interest" (DWAF, 1997 p. 4). Though this is an ecologically favourable designation, it presents challenges for coordination within more socially and administratively meaningful units.

CMAs will be governed by a board containing both stakeholder representatives and catchment management expertise, and are tasked with seeking "co-operation and agreement on water-related matters from the various stakeholders and interested persons" (DWAF, 1999c). CMAs are thus pledged to rely heavily on public participation, and consensus decision-making. This participatory approach will again be a very new experience for all stakeholders, and particularly for those officials of the DWAF, who in the past became accustomed to a centralised, top-down management system (Rogers *et al*., 2000). Prior to 1998 the responsibility for managing the country's rivers and other water resources lay solely with the national Department of Water Affairs. Control was thus highly centralized, though at the same time highly decentralized where delegated to a hierarchical system of local irrigation boards (Woodhouse and Hassan, 1999). Where Government Water Control Areas had not been declared, irrigation boards were able to attain a high degree of autonomy, being "essentially farmers' organisations, governed by representatives of quite small 'communities' of commercial irrigators, who historically have only rarely had to negotiate use of water with 'outsiders'" (Woodhouse and Hassan, 1999 p. 39). Irrigation boards were characterised by top-down administration with minimal transparency or stakeholder participation. The new water law does not provide a continued role for Irrigation Boards, and they are required to transform into Water User Associations, which will have additional requirements of representivity, consultation of interested and affected parties, and government approval of their constitutions (NWA, 1998, Ch.8). It is likely that this transformation will be perceived as a substantial loss of power and autonomy by those stakeholders who were able to exert considerable influence over their own access to the resource through their Irrigation Boards in the past.

3.6 Stakeholder and public participation

It is the central role given to participation in the NWA, and its crucial influence on the successful achievement of the vision of the new water policy, that has provided the rationale for this research.

CMA's are intended to be the key facilitators of the participation of stakeholders, at the WMA level. As it will take some time before CMAs are established and functional, in the interim this role will need to be fulfilled by DWAF, particularly the DWAF Regional Offices, which are expected to behave as surrogate CMAs (DWAF, 1999c).

References to public participation in the activities of Catchment Management Agencies, and the design of Catchment Management Strategies, within the NWA are as follows:

- CMAs must seek *co-operation and agreement from various stakeholders and interested persons.* (ch2)
- Catchment Management Strategies *must enable the public to participate in managing water resources within its Water Management Area; must take into account the needs*

and expectations of existing/potential water users; must set out the institutions to be established. (s9)

- CMAs, in developing a Catchment Management Strategy, must *consult with any person/their representative organisations whose activities affect/might affect water resources, within its Water Management Area and who have an interest in the content, effect or implementation of the Catchment Management Strategy*. (s10)
- A CMA must *strive toward achieving co-operation and consensus in managing water resources.* (s79)
- One initial function of a CMA is to promote *community participation in the protection, use, development, conservation, management and control of the water resources in its Water Management Area.* (s80)
- The members of a CMA governing board must *represent a balance among the interests of water users, potential water users, local and provincial government and environmental interest groups.* (s81)
- A CMA may establish committees, *including consultative bodies to advise it.* (s82)

Though these statements emphasise the role of public participation in managing local water resources, they are not prescriptive of the form this participation should take, and the NWA offers no framework with which to assess and enforce the implementation of this requirement for participation.

In the Act, the level of power-sharing or devolution that government intends is clearly specified for CMAs and WUAs, but not for the participatory processes these CMAs (and WUAs) are required to undertake. This is a crucial issue as the level of power-sharing intended extrapolates directly to the purpose of participation, the incentives to stakeholders and the expectations that can and should be created by government when initiating participatory processes. Where along the spectrum of participatory purpose do the intentions of government lie? And is this intention different for different parts of the WRM process? This question has been addressed to some extent in recently developed policy guidelines, and will be discussed along with these in the next two sections (Sections 3.7 and 3.8).

Both the promise, and the challenge, of participation are intensified by the contrast this new policy approach offers to that employed by previous regimes. There is little precedent or experience of conducting or engaging participatory processes amongst South African practitioners or stakeholders. Public input into governmental decision-making in the past was chiefly limited to an opportunity for comment on new policy announced in the Government Gazette – a publication highly inaccessible to the average South African, and more recently the opportunity for participation in Environmental Impact Assessments (EIAs) for dams and other large developments (Greyling, 1997). EIAs are usually once-off events conducted in reaction to a proposed development and confined to discussing the acceptability of the direct implications of this development to a fairly localised stakeholder group. The style of participation encouraged by EIAs and their allied Social Impact Assessments is not appropriate for the more proactive, integrated and long-term decision-making, involving a broad range of societal groups, that is envisaged and required by the NWA.

The novelty of participation in South African WRM emphasises the need to provide structured support to those conducting participatory processes, in the form of guidelines relevant to local contexts and decisions.

3.7 DWAF guidelines for public participation

Given the non-prescriptiveness of the Act with regard to the requirements for satisfactory 'participation', comprehensive guidelines for conducting participatory processes have been slow to emerge. At the time of the initiation of the participatory processes presented as case studies in this thesis, no DWAF-originated guidelines were yet available. In 1998, some advice was offered by a WRC publication by Gőrgens *et al.*. This emphasised the critical role of active stakeholder involvement in achieving success and sustainability of catchment management processes, stating that "this element represents the core of catchment management, without which the process is doomed" (p. 5). Gőrgens *et al.* (1998) proposed that participatory processes should be "appropriate, inclusive and representative, and continue through the ongoing process" (p. 5), and should be aimed at mobilising stakeholders. Capacity building and the use of suitable communication channels and formats were identified as key factors.

Two publications by DWAF subsequently addressed the issue of a lack of guidance for officials and facilitators in the running of participatory processes in the implementation of the NWA. The first, published in 2000, formed part of a series of guides for CMAs and WUAs; the second, published in September 2001, was developed to offer more comprehensive guidelines for conducting participatory processes, though in the generic context of implementing the NWA.

3.7.1 The CMA and WUA Guide Series: Guide 4 – Public participation for CMAs and WUAs (2000)

This publication outlines guiding principles for appropriate public participation, and provides examples of how to execute the principles suggested. A set of overarching principles is followed by a list of more practical process principles, which are also suggested to be aspects against which processes should ultimately be evaluated.

The overarching principles include (DWAF, 2000a):

- Flexibility (appropriate to local needs and circumstances);
- Inclusivity (including all sectors, perspectives and interests);
- Transparency and honesty (no hidden agendas);
- Visible commitment by authorities to neutrality and the consideration of all viewpoints;

- Clarification of stakeholders' roles and responsibilities;
- Provision of information at an early stage (what decisions will be made by whom, who is accountable, how stakeholders contributions will be taken up);
- Independent facilitation by a neutral party;
- Pursuit of a common end goal of sustainability.

Practical process principles include:

- The integration of public issues and technical assessment with decision-making;
- "Checks and balances" (through stakeholders having a say in how they are consulted, verifying that issues have been covered, having some responsibility delegated to them, and nominating peer reviewers for technical evaluations);
- Sufficient and accessible information;
- Ample announcement of opportunity for involvement or comment;
- Respect for cultural diversity;
- Efficiency (use existing events, structure agendas to meet clear objectives for meetings);
- Make special efforts to engage previously disadvantaged communities;
- Ample opportunity for stakeholders to exchange information and viewpoints ("multiple options must be encouraged, and parties must discuss criteria by which to evaluate them, which eventually will lead to convergence in thinking" (DWAF, 2000a p. 12)).

3.7.2 Generic public participation guidelines (2001)

These guidelines were commissioned by DWAF in response to a need for such a publication identified within the department. They are not intended as prescriptive, but aim to support DWAF officials "in understanding public participation as an aid to decision-making and in applying public participation within the scope of Department activities" (DWAF, 2001 p. i).

The essence of the guidelines is a list of sixteen principles that underpin public participation. Several of these echo the CMA and WUA Guide Series' principles, in calling for: flexibility, inclusivity, integration of public issues and technical assessments, rights and roles, accessibility of information, consideration of multiple options, and efficiency. Further principles proposed are (DWAF, 2001):

- Continuity in participation (stakeholders should be involved from the earliest stages of an initiative, until its end);
- Mutual respect between role-players;
- Transparency (role-players should be honest, open and equitable and act with integrity);
- Shared accountability and commitment;
- Capacity building and empowerment (all should receive the opportunity and support to participate meaningfully);
- Feedback to and from stakeholders (to establish trust and assurance)

- Suitability of scale of public involvement relative to the impacts of the decision and suited to the scale and type of initiative;
- Monitoring and evaluation in order to minimise mistakes in the present and apply lessons learned to the future.

3.7.3 Usefulness of available SA guidelines for directing implementation of participatory processes

Both the 2000 and 2001 DWAF publications have focused on being non-prescriptive, offering broad, generic principles applicable to any and all participatory purposes. Principles are presented in bullet form, with an accompanying explanatory paragraph for each. Both are written in a style and format accessible to readers unfamiliar with participatory concepts, or with the academic literature. There is however little attempt at creating a deeper understanding in readers of the potential complexities and inherent tensions of engaging stakeholder involvement. The 2000 guidelines do however hint at the 'consensus' debate. Consensus is mentioned as a goal of participation but with the warning that "trying to force consensus during the early stages of the process may be perceived as the DAD (Decide-Announce-Defend) principle and may stifle innovative ideas" (DWAF, 2000a, p. 6).

The origins of the principles presented are not possible to determine directly for the 2000 guidelines, as the text is not referenced, though a bibliography lists Kaner's popular "guide to participatory decision-making" and Susskind and Cruikshank's and Fisher and Ury's works on consensual negotiation techniques. Renn *et al.* (1995c) is the only more academic work listed. The 2001 guidelines are referenced, and draw on a broader, but still quite limited set of publications. The document quotes extensively from the work of IAP2. The 'generic' guidelines are however thorough, and deal with several different types and formats of participation.

Discussion of the role of context in affecting the outcome of participatory processes in Chapter 2 (Section 2.9.3) highlighted the need for locally appropriate, context-sensitive guidelines for participation, which take into account stakeholder perspectives. DWAF's 2000 guidelines draw on the work and experiences of South African practitioners, and include advice for dealing with the contextual challenge of involving previously disadvantaged communities. The 'generic guidelines' use more international sources, and, as their title implies, are generally indifferent to 'context'. The guidelines proposed by both publications are theorist- or practitioner-derived. The lack of locally derived guidance for participation is understandable given the short history of these processes in South Africa. This short history emphasises the imperative to learn from current implementation processes, using pilot studies, and ongoing monitoring and evaluation programmes.

3.8 Level of power-sharing intended

The new water policy and law does not specify the level of power-sharing or stakeholder influence it intends to achieve. However, the 2001 'Generic guidelines' do make some definitive statements in this regard. The document is very clear that: "Public participation must not be confused with decision-making" (DWAF, 2001, p. 1) and that "Public participation does not mean that the public makes decisions together with the decision-makers. Rather, it means that the public's views and opinions are available to decision-makers and considered in the decision-making process" (p. 1). "The Department therefore undertakes public participation processes in order to create awareness and gather the public's views and opinions on issues affecting them. These inputs are then incorporated with other information provided to decision-makers."

The statements quoted above would place participation in South African IWRM at the level of "consultation" when considered in the context of the spectra described in Chapter 2. The foreword to the generic guidelines (DWAF, 2001), by then Minister of Water Affairs, Ronnie Kasrils, however refers to the guidelines' potential contribution toward implementing "truly participative democracy".

The 'generic guidelines' do mention that there are different levels or intensities of participation, and that the intensity of participation must match the goal of the initiative. The benefits and goals of participation mentioned by the guidelines however include those generally sought by higher levels of participatory spectra: facilitated cooperation between previously segregated sectors, improved decision-making, sustainable development, and positive growth and attitudes among stakeholders (p.ix), which are achieved by processes aimed at 'trust and a shared vision', and a 'transparent inclusive and fair process'. This suggests a potential mismatch between the intended outcomes and processes of participation for WRM in South Africa. Discussions at meetings involving members of DWAF, the Water Research Commission, and the research and practitioner community, indicate that the issue of power-sharing in the new water policy is subject to multiple interpretations (pers. obs., WRC Steering Committee meeting, 27 October 2000; pers. obs., SASAqS, 2001). However, this lack of clarity, has not, to the knowledge of and in the duration of this study, led to purposeful debate and direction within national government or DWAF on this point.

This lack of clarity, particularly at the broadest conceptual level (from which all lower level purposes and processes must take their direction) is a serious challenge to the success and sustainability of participatory resource management in South Africa. Other challenges identified within the review of South Africa's WRM policy and context are synthesised below.

3.9 Challenges to implementation, equity and sustainability

Though the new policy and law have been lauded as a huge achievement for South Africa, and a model for water law reform across the world (MacKay, 2003), the new policy vision faces several challenges in its successful implementation. These include: (1) the legacy of inequitable and unsustainable resource use, (2) power imbalances between participating groups, and (3) the high levels of change currently being experienced by all role-players, and the uncertainties resulting from these.

3.9.1 Legacy of the past

The new system of IWRM in South Africa has inherited a challenging legacy from its predecessor. The outcome of the old Water Act (no. 54 of 1956), and its associated management approach, has been one of entrenched social inequity, and ongoing environmental degradation (Davies and Day, 1998). However, attitudes and expectations, developed over decades of WRM under the direction of the old water law, are not likely to change overnight, and 'buy-in' to new ways of thinking and acting will need to develop over time.

Inequitable and unsustainable resource use

In the long term, the goals of equity and sustainability are positively correlated (Gardner, 1989). However, in the short term (of significance to those in political office), giving urgent attention to the problems of both inequity and unsustainability is potentially problematic. Addressing the inequity of access is hindered by the current over-allocation of the majority of water resources, poor information as to the true extent of water use or availability, and the extensive protection that the new water law provides for 'existing lawful use' (Woodhouse and Hassan, 1999). In addition there is uncertainty about future resource availability in the event of climate change, and increasing demand from all user sectors. Setting of the Reserve is a lengthy procedure (DWAF, 1999a) which will delay new allocations and the initiation of a 'compulsory licensing' process. There is thus the considerable danger that those dispossessed by previous management regimes will be made to bear the costs of 'the Reserve' and the protection of a resource they are not presently allowed to benefit from. Alternatively, there is the danger that political pressure for the redress of past imbalances will compromise the interests of long-term resource protection. Government will need to carefully balance the tension between these two policy priorities, and pay careful attention to the management of the perceptions and expectations of all stakeholders for what can be achieved over different time frames. In the shorter term, voluntary agreements between stakeholders, and not the NWA implementation process, may be the most expedient means to addressing both of these ideals. Successful participatory processes, focused on building positive inter-sectoral relationships, offer potential for initiating such cooperative efforts.

Supply-oriented, water-focused management approach

As explained in Section 3.4.3, stakeholders familiar with previous approaches to WRM are accustomed to supply-oriented management of 'water'. These historic perceptions of water resources and management goals could hamper buy-in to the concept of the ecological Reserve and an ecosystem-based management approach.

In addition, though the NWA and its associated policy is intended to achieve a strategic and adaptive resource management system, in practice many of its decisions will be difficult to 'adapt' quickly enough to respond positively to changing information and circumstances. Though licences for water use are subject to a 5-year review, the Act does not make provision for the review of the final Reserve or Management Classes. Because setting the Reserve and issuing water use licences are statutory processes, they will be subject to the delays and slow progress of a bureaucracy and legal system. Should the Reserve not be met it will be extremely difficult to change licences and thereby reduce allocations in favour of the Reserve (Uys, unpubl.). Truly adaptive management will need to use more flexible means to avoid these delays and hindrances – one option is to make use of informal agreements and voluntary actions of catchment resource users. Again, participation and its potential for creating buy-in to the new water policy, and generating cooperative agreements between stakeholders through improved relationships, will be crucial to building the necessary flexibility required for adaptive resource management.

3.9.2 Power imbalances

'Public participation', and the involvement of previously marginalised groupings, offers the potential for achieving greater equity in resource allocation and management. However, future realisation of this potential in the presence of extensive power imbalances between participating local groups is not certain. These power imbalances stem from both differences in the capacity to engage participatory or technical processes, as well as extreme imbalances in 'bargaining power' related to both possession and status.

Devolution of previously centralised power to the local level is a means to make management more responsive to local needs. However, Woodhouse and Hassan (1999) caution that delegation of power to the catchment level carries the risk that "the management process could be captured by some locally influential interest groups to the exclusion of others" (Woodhouse and Hassan, 1999 p. 7). It has been shown that, despite widespread optimism to the contrary, this risk of domination by more powerful groups is not diminished by decentralisation (Manor, 1995; Carney, 1995; Carney and Farrington, 1998 in Woodhouse and Hassan, 1999).

Thus it cannot be assumed that the combination of decentralisation and participation will, in itself, create equitable and inclusive WRM decision-making. Those conducting participatory processes, and evaluating their outcomes, will need to pay careful attention to the role of power imbalances and the need to compensate for the effects of these.

3.9.3 High levels of change

The NWA has introduced a time of massive change in the field of WRM in South Africa. This is accompanied by similar change in the broader political, social and economic spheres. This change has resulted in various WRM role-players experiencing:

- Confusion and uncertainty over the intentions and implications of new policy;
- Fear of lost roles and powers (e.g. DWAF officials, Irrigation Boards);
- Raised expectations with the hope of achieving access to resources long denied.

Because the new policy and law were developed over a relatively short period of time, the majority of DWAF employees were not part of this ongoing process (MacKay, pers. comm.) and will still need to develop understanding of, and buy-in to, the new policy over time. In the absence of this understanding and clarity, multiple interpretations of policy intent and process are likely to exist across the organisation. As the details of policy and implementation will most likely take several years to work out, and possibly change several times as learning emerges from pilot studies, this uncertainty is likely to remain for some time, and could affect attitudes toward implementation and particularly the participation of stakeholders – a novel experience for the majority of DWAF employees.

In addition, the NWA was purposefully designed as legislation that will be 'phased in' (MacKay, 2003), in recognition of the potentially disastrous effects of instantaneously replacing an old law and system. However, this has its own dangers, in that it allows people to entertain the idea that some aspects of the law will never actually be implemented (Rowlston, pers. comm.).

3.10 Conclusion: Implications for the design and implementation of participatory processes for South African WRM

South Africa's new water policy and law has introduced the potential for participation in a decentralised, proactive and adaptive, integrated WRM system, and with this, the potential for greater equity, sustainability and efficiency of water resource use. However, implementation of the new policy and law faces several challenges: a legacy of social and environmental problems requiring urgent redress, the slow response time of a legal and bureaucratic system, the risk of inequitable participation due to severe power imbalances between stakeholder groups, the durability of old ways of thinking and acting, and, perhaps most seriously, diverse interpretations of the intent of a procedurally non-prescriptive policy.

The combination of decentralisation and participation does not offer a 'silver bullet' for the future achievement of equity and sustainability in water resource management. Procedural aspects of policy implementation are likely to have a significant effect on the degree of social

and environmental change that this new policy approach is able to achieve. The highest ideals of the Act can only be achieved through the successful engagement of individual resource users. This will require successful and sustainable participatory processes, which inspire both ownership and action, as the only means to achieving outcomes out of reach of legislation and enforcement. However, **conflicting pressures for equity and sustainability**, the threat of **power imbalances**, and a **lack of capacity** in all role-players, may cause government and specialists to hold on more tightly to the reins of resource decision-making, not less. **Lack of clarity within the South African water sector as to the intentions of policy**, and particularly the level of influence on decision-making which stakeholders should have, could lead facilitators of participatory processes to 'default' to shallower participatory models than the vision of the new Constitution and water policy may intend.

This research will investigate the influence and implications of these contextual challenges within cases studies of current implementation, and the perspectives of the various role-players in South African WRM. Guidelines for conducting participation must ultimately take these contextual challenges into account, and recommend strategies for addressing their influence on the success of participatory processes. The following chapter describes the approach taken to addressing this objective, and the overall aim of this research, through the combination of various research methods.

CHAPTER 4:

RESEARCH DESIGN, APPROACH AND METHODS

4.1 Exploratory, action-oriented research

Research is undertaken for one or more of four main purposes: exploration, explanation, description and prediction (Marshall and Rossman, 1995). Exploratory research can "serve to identify important variables for subsequent explanatory or predictive research" (Marshall and Rossman, 1995 p. 10). Neumann (1996 p. 18) suggests that the goals of exploration are to: "formulate more precise questions that future research can answer"; "become familiar with the basic facts, people and concerns involved"; "develop a well-grounded mental picture of what is occurring"; "generate many ideas and develop tentative theories and conjectures"; and to "formulate questions and refine issues for more systematic sampling" (p. 19).

Given the broad scope and novel character of public participation in WRM in South Africa, the potential importance of context in determining the relevance of existing theory, the lack of consensus on 'best practice' in the literature, and the trans/interdisciplinary nature of the issues involved, this research had a primarily exploratory purpose. This aimed to identify the most important variables or factors affecting the success of participatory processes, and then to generate hypotheses or explanations linking these variables to outcomes.

A broad scope of research was necessary to explore as many relevant aspects and levels of the concept and practice of 'participation', both in its local, more practical context, as well as at the broader, more conceptual level of national politics, policy and planning. However this broad scope necessitated a reduced focus and depth of investigation of any particular context or scale – the "familiar trade-off between breadth and depth" (Marshall and Rossman, 1995 p. 81).

This broad focus ranged:

- From sites/case studies in WMAs to a national/country-wide perspective (as held by government and many practitioners/researchers).
- Across role-players (government, practitioners, researchers and stakeholders).

- Across conceptual scales – levels of social organisation and analysis (from the individual to the societal level).

Given the urgent need for more equitable and sustainable WRM in South Africa, this research was action-oriented – i.e. a form of applied research which is not value-neutral but will seek to promote change (Lewin, 1946 in Ezzy, 2002; Neuman, 2000). This research was therefore interventionist – seeking to change the process or situation under examination as a contemporary consequence of the research process. Interaction with stakeholders, practitioners, government and other researchers was with the intention not only to investigate, but also to influence, the process of policy implementation. It was hoped to achieve this through raising awareness of the range of relevant issues, stimulating debate, and building capacity of participants through their involvement. Each interaction was viewed as an opportunity to discuss and transfer developing knowledge and insights, and to challenge participants to the achievement of greater equity and sustainability in their contribution to water resource management.

4.2 A qualitative research paradigm

Marshall and Rossman (1995 p. 39) stress the unique strengths of a qualitative paradigm for conducting "research that is exploratory" and "that assumes the value of context and setting". A qualitative research approach is "uniquely suited to uncovering the unexpected and exploring new avenues" (Marshall and Rossman, 1995 p. 26) through "retaining the flexibility to allow the unanticipated to emerge" (p. 22).

The nature of the research questions posed in this study demanded a qualitative approach to data collection and analysis. Qualitative research usually addresses 'how' or 'what' questions, in contrast to quantitative research that asks 'why' and searches for a "comparison of groups … or a relationship between variables, with the intent of establishing an association, relationship, or cause and effect" (Creswell, 1998 p. 17). Qualitative research is a method of inquiry in which the researcher is a key instrument of data collection, who gathers data in the form of words or pictures, builds a complex, holistic picture (Creswell, 1998), and focuses on the meaning of research participants or subjects from their perspective (Ezzy, 2002; Ferreira, 1988). Qualitative research recognises multiple realities, and attempts to find multiple perspectives within a theme and report divergent views (Creswell, 1998).

Qualitative research's holistic purpose and approach require a focus on context, and detail, as essential to understanding a situation (Ferreira, 1988). Relative to quantitative methods, a qualitative research approach has the potential to provide a more in-depth understanding of its subject matter, and offers the opportunity to interpret information within its appropriate social context (Neuman, 2000). An understanding of context is enhanced because qualitative research takes place in a natural setting (Creswell, 1998), and is usually inductive, developing theory and explanation from the data themselves (Ferreira, 1988).

Qualitative studies are particularly suited to the following purposes (Maxwell, 1996), which form an integral part of this study:

- Understanding the **meaning** for participants (the participant's perspective) of the "events, situations and actions they are involved with and of the accounts they give of their lives and experiences." (p. 17)
- Understanding the **context** within which participants act, and the **process** by which actions and events take place. Qualitative research emphasises process over outcomes. It is not unconcerned with outcomes, but "its strength is in getting at the processes that led to these outcomes" (p. 20).
- Developing **causal explanations**, again through a focus on the process connecting two variables as opposed to simply the correlation between variables.

These purposes, in addition to the inductive, open-ended strategy required to achieve them, gives qualitative research an advantage in (Maxwell, 1996):

- Conducting **formative evaluations**, i.e. valuation aimed at improving existing practice and not merely at assessing value.
- Undertaking collaborative or **action research** with practitioners or research participants.

There are four basic types of qualitative data (Creswell, 1998): interviews, documents, observations and audiovisual materials. This study made use of three of these. The overall design of the approach to collecting and integrating these data, to deliver the objectives and ultimate aim of this research, is discussed next.

4.3 Overall research design

The overall approach to meeting the objectives of this research took the form of two main processes, involving five data collection methods:

- Investigating, and synthesising different perspectives, needs and problems of various participants in the future process of IWRM. These include the perspectives of stakeholders/resource users, DWAF, NGOs, consultants, practitioners, specialists, and other researchers. This information was gathered in a variety of ways: i.e. workshops, interviews, and research meetings.
- Observing, comparing, and evaluating existing official (DWAF) processes of NWA implementation in the Inkomati and Olifants WMAs. This took place through direct observation by attending meetings held within, and by studying the documentation resulting from, these processes.

The linkages between the various methods and aspects of the overall study, and the manner in which they were combined to address the three objectives and ultimate aim of this research, are depicted in Figure 4.1. In keeping with its exploratory and qualitative nature, the specific

approach undertaken was contingent upon new developments and attempted to incorporate and respond to new interpretation and understanding in an adaptive manner.

This study made use of a variety of methods and sources of information, in order to facilitate the examination of issues from as many perspectives as possible. Use of a variety of data sources and collection techniques enables 'data triangulation' (Denzin, 1970; Maxwell, 1996; Creswell, 1998; Ferreira, 1998). This is a means of testing and reinforcing developing insights and understanding (Neuman, 2000), and reduces the risk that one's findings will reflect only the systematic biases or limitations of a particular method (Maxwell, 1996). It is also likely that different methods will reveal different perspectives – these differences are themselves a source of information, and may lead to further insights.

4.3.1 An inductive approach using the principles of 'grounded theory'

Though this research was chiefly exploratory in nature, it also had an explanatory purpose – in its attempt to infer procedural influences on the outcomes of case studies, and ultimately to develop a model linking the process elements of alternative approaches to their likely outcomes. In essence this was an attempt to develop 'theory', and by using the principles of a 'grounded theory' tradition. 'Grounded theory' aims to develop a theory "closely related to the context of the phenomenon being studied" (Creswell, 1998 p. 56). "The purpose of grounded theory is to build a theory that is faithful to the evidence" (Neuman, 2000). The process of "inductively generating principles in the course of field work diminishes the influences of preconceptions and assumptions; which can direct the results along lines pre-determined" (Tuler and Webler, 1999 p. 440).

Though this research was not as structured, systematic and detailed (data rich) as a classical 'grounded theory' approach, this study employed the principles of 'grounded theory' in that it was primarily inductive, addressing its objectives by working from the 'particular' (the data and their context) to the 'general' (Forcese and Richer, 1973). Though some deductive processes were also employed (the literature is used in developing the model of alternative approaches presented in Chapter 8 and the set of principles and processes presented in Chapter 9), these only occurred after, and were therefore framed by, an initial inductive phase. The idea was to explore South African WRM participation in its local context, using the perspectives of local role-players, and the experiences of case studies, as well as my own experiences of interacting with the case studies and role-players, and thereby to build a 'theory' of what constitutes a successful participatory process.

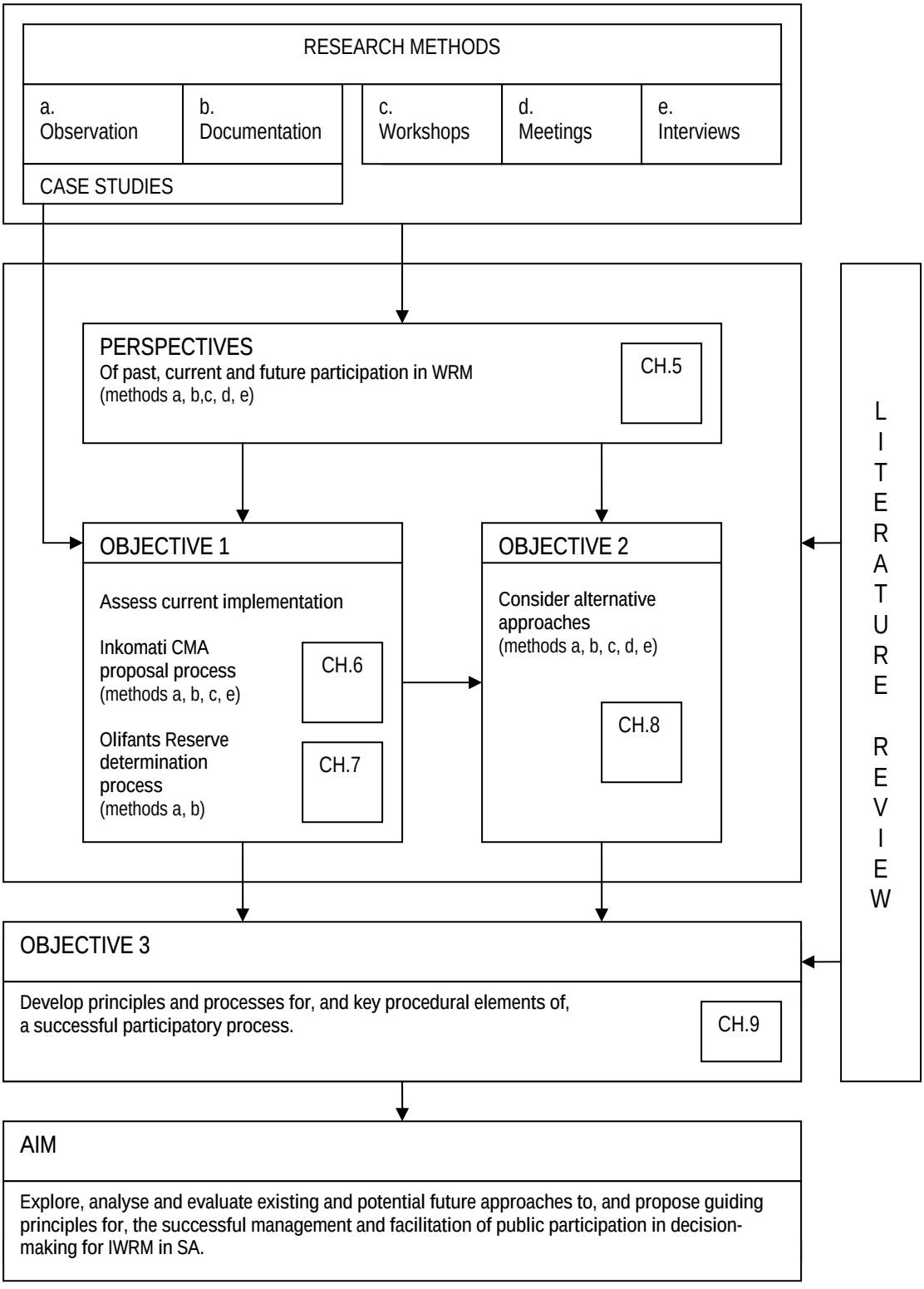

Figure 4.1: Overall research design showing the contribution of various methods to address the three objectives and aim of the study, and the chapters in which these results are presented

Unlike pure hypothetico-deductive research (Creswell, 1998), the theoretical framework of this study was not used to suggest hypotheses (which the rest of the research and thesis aimed to test), but merely bounded the study's concepts, and offered potential explanations and theories of 'public participation'. Given that little consensus exists on 'best practice' (Tuler and Webler, 1999), that there is also little evidence of successful implementation of the relatively widely-proposed principles of 'deeper' (deliberative and inclusive) participation (Dorcey, 1991; Both Ends, 2000), and given the potentially significant influence of context, I did not wish to pre-judge the process of participation in South African WRM using the international literature (most of which is based on First World contexts and research).

Finally, though a set of principles and processes for participation in South African WRM is derived directly from the data, I draw on the literature relevant to these findings, to expand on this set. In addition, though I did not want to pre-judge the desired 'process' elements of a successful participatory process, evaluating successful versus unsuccessful participatory initiatives required that I pre-judge 'outcomes', using a framework derived from the literature and South Africa's new water policy.

In summary: This study used a predominantly inductive approach to develop a set of recommendations for conducting public participation in WRM in South Africa. The study was designed to evaluate approaches to participation through an evaluation of their outcomes, in relation to a set of outcomes derived in Chapter 2 (Section 2.11). The workshops, interviews and meetings offered the opportunity for sourcing the perspectives of role players for both process and outcome (Chapter 5). In the case studies, outcomes were assessed first, and then the potential procedural influences on these inferred, based on an analysis of the process elements observed. 'Process' and 'outcome' are ultimately linked by means of a model (drawn from the experiences of case studies as well as the relevant literature/theory), to address Objective 2 (Chapter 8). Finally, a suggested approach ('process') is presented (Chapter 9), drawing on relevant literature, and using the causal links induced and discussed in the case studies and conceptual model.

The selection of case studies, and the specific processes of collecting and analysing the data used to achieve these ends, is discussed in the next three sections, respectively.

4.4 Use of case studies

The early process of NWA implementation across the country provided numerous opportunities for the observation of both social and technical aspects of the water policy in action. Two case studies were therefore used to assess the participatory aspects of current implementation (Objective 1 of this research). However, this did not really constitute a cross-case study – the two cases were used to study different aspects of participation, within different aspects of the overall WRM process.

A case study approach was adopted because of the need to consider processes and outcomes in context. Creswell (1998 p. 61) defines a case study as the "exploration of a bounded system … over time through detailed in-depth data collection involving multiple sources of information rich in context."

4.4.1 Selection of case studies

In early 2000 when this research began, the Inkomati WMA was within the fourth year of stakeholder consultation toward the establishment of a CMA. The Olifants WMA was in the advanced stages of both the technical and participatory processes of Reserve determination, and was continuing with the process of developing a CMA proposal.

These two catchments were, and still are, forerunners in these two important aspects of NWA implementation, and their experiences were therefore of great value to this research. These experiences were accessible by a number of means: direct observation of their participatory processes, examination of resulting documentation, and interaction with the people involved – including government, specialists and stakeholders. These cases were also selected for their accessibility. This research formed part of a larger study being undertaken by a multi-institutional research team, and these cases were selected for their accessibility to myself and the research team. Access to these particular case studies was facilitated by the existing associations and relationships of members of the research team. Many of the research team members had, as a result of direct involvement in current or previous research or resource management initiatives, established relationships with officials, practitioners and stakeholders involved in these two WMAs, enabling access that would most likely have been denied to other, unknown, researchers. This history and relationship was strongest for the Inkomati. The primary spatial focus of this study was therefore the Inkomati WMA, with a secondary focus on the Olifants WMA. The Olifants Reserve process was less accessible to an observer than the Inkomati CMA process, in part because of the limitations of the much smaller group size involved (which led the organisers to restrict access to observers), and could therefore not be studied at the same level of detail.

The Inkomati provides a diverse range of stakeholder groupings, sectoral and regional interests and problems, but within a relatively small spatial extent. In addition, the area has been the historic and current focus of several research initiatives (e.g. the Kruger National Park Rivers Research Programme (WRC, 2000); Save the Sand (Pollard *et al.*, 1998)) providing a wealth of contextual and other information. The Inkomati has also been the site of the most comprehensive programme of stakeholder consultation yet undertaken as part of the implementation of the NWA, and was deemed to be the WMA most likely to provide the country's first Catchment Management Agency. Similarly the Olifants WMA was the first to initiate a comprehensive Reserve determination process.

The setting of an Ecological Reserve, based on a stakeholder description of a Desired Future State, was a decision of major relevance to this research, as it is representative of many of the

most difficult challenges of participatory resource management decisions. There is potential for high stakes, difficult trade-offs, highly technical content, and the need for extensive interaction between specialists and stakeholders, and the integration of expert and public inputs. Use of the Olifants Reserve process as an additional case study was inspired by a particular interest in how stakeholder knowledge, needs and values are accessed within the process, how they are integrated to reach a decision, and how the technical process of assessing ecological variables and constraints interfaces with the more social process of stakeholder interaction. These features were also part of the Inkomati CMA proposal process to some extent, but are not as central to decision-making about an institutional structure.

A description of the relevant aspects of the Inkomati and Olifants WMAs is included in the discussion of each case study in Chapters 6 and 7 respectively.

4.5 Data collection methods

Five data collection methods were used to address the objectives of this research: workshops, semi-structured interviews, meetings, and the study of two different cases of current implementation through participant observation and the examination of the documentation arising from the case study participatory processes. Details of each method are discussed below.

4.5.1 Workshops

As mentioned with regard to the selection of case studies, this research formed part of a larger project being undertaken for the Water Research Commission (WRC) by a multi-institutional research team. A series of three stakeholder workshops was conducted as part of this WRC project (to develop "principles and processes for participatory and integrated water resource management under the NWA"). A particular focus within these workshops was the description of a 'Desired Future State' for a river and this provided the main motivation for the workshop series.

The series of three workshops was designed to deliver a number of outcomes, though these were still exploratory in nature, and the process was open to change in response to unfolding events and emerging insights.

The workshop series had the following objectives:

- To gather perspectives and develop understanding of context:
    - To gather stakeholder views on/preferences for, what a participatory management system should address and do, and the principles by which it should operate.

- To understand the context within which participatory WRM will need to take place.
    - e.g. Issues which need address in stakeholders' view.
    - e.g. Challenges and constraints to participation.

- To assess the capacity that already exists to engage participatory WRM.
    - e.g. How do stakeholders currently interact?
    - e.g. To what extent are people organised around water resource management issues, and what communication networks already exist?

- Action research
    - To test the research team's developing ideas and concepts with a suitable group of stakeholders.
    - How does and can both stakeholder and practitioner capacity change through exposure to a facilitated, interactive process?

Participants and logistics

At the time of workshop initiation (May 2000), the Inkomati was in its third and final year of consultation toward the development of a proposal for CMA establishment. This participatory process, undertaken by DWAF, largely involved the Inkomati Reference Group (IRG), consisting of about 150 stakeholders, with wide sectoral and regional representation. The workshop participants were volunteers drawn from the IRG. We introduced the project at an IRG meeting (on 9 June 2000), and offered people the opportunity to participate. We did not offer payment but explained that all travel and other expenses would be taken care of by the project. The volunteer group was also supplemented by invitation of key stakeholders known to the team, and in order to get broader sectoral representation. However we did not intend or expect participants to act as representatives of particular stakeholder constituencies, but rather to offer their perspectives and experiences as individual stakeholders. Participants included stakeholders from the Komati, Crocodile and Sabie-Sand subcatchments, and from both commercial and emerging agriculture, forestry, industry, conservation, tribal authorities, SANCO, water boards and irrigation boards. Various members of DWAF (Regional and National Offices) were invited to all three workshops but failed for various reasons to attend the first or second workshops, and only one member of DWAF was able to attend the final one. Given that participants were drawn from the IRG, and many were nominees for Catchment Management Committees intended to form part of an eventual CMA, it can be assumed that many held positions of leadership in their communities. All were literate and (with a single exception in the first workshop) were able to speak and understand English. The workshops were conducted in English, though participants sometimes interpreted the discussion for each other in other languages.

Three workshops were held, between July 2000 and July 2001. The majority of stakeholders attended all three (17, 17 and 16 stakeholders attended workshops 1, 2 and 3 respectively). The first two workshops were two-day events, with participants being accommodated overnight if they so desired. The final workshop was held for one day only. The venue for all

three workshops was a small hotel, chosen because of its central location. Nevertheless, some stakeholders travelled over 200 kilometres to attend.

General workshop process and approach

We ran the workshops as a team, with one main facilitator to initiate and guide discussion, and another to provide synthesis and reflection. The team planned the broad workshop approach and strategy together, and attended the workshops as participants along with the stakeholders. I took part in this planning process, and was also responsible for writing all preparatory notes, and for synthesising workshop proceedings (using notes, taken by myself and other team members, audio recording and flipchart summaries) in a format suitable for stakeholders. In addition, I undertook the task of liaising with participants outside of the workshop events, and handled all logistical and budgeting concerns.

In keeping with our Action Research objective and approach, we aimed to conduct the workshops as a cooperative learning process, in which all present – stakeholders, government and the research team – could learn from each other's perspectives and experiences. The approach and process were kept as informal as possible, and were sufficiently flexible to respond to participant's needs, and the progress of events.

The workshops largely consisted of inclusive discussion, within an agenda broadly set by the team, but modified by the stakeholders themselves through the workshop process. Some time before the workshop date, we sent participants a short written introduction to the workshop purpose and content, with some open-ended questions to stimulate thinking about the issues we hoped to discuss. At the workshops discussion was initiated by posing similar questions, and gathering responses from everyone present. Facilitation largely followed the approach developed by Rogers and Bestbier (1997) and described in Bestbier (1998). The facilitator's role was primarily to create an atmosphere enabling productive interaction (Maser, 1996 in Bestbier, 1998). The facilitator was responsible for guiding discussion, raising questions, restating ideas, and summarising progress (Bestbier, 1998). Participants were allowed to give their views without interruption or criticism. Summary points were recorded for each stakeholder's contribution on flip-charts, which were then pasted up around the room, to provide a visual record of the ongoing process for participants, and thus improve continuity and avoid redundancy (Bestbier, 1998).

To assess participants' views on workshop effectiveness, questionnaires (developed and analysed by another member of the research team) were administered to participants after the second and third workshops.

Specific workshop themes

The first workshop was chiefly exploratory in nature, surfacing the issues of main concern to stakeholders, and building context of what they saw as relevant to WRM. These issues were then used to develop a set of principles for a new system of participatory water resource management.

The second workshop was focused on the specific issue of developing a vision for a desired future state. This included a field trip to a nearby river and wetland to illustrate the concept of river ecosystem goods and services.

The third workshop aimed to reach closure of the workshop series, and to address the issue of communication – both within and across the various scales of representation for IWRM.

The specific purpose, content and outcomes of each of the three workshops will be discussed in detail in chapter 5.

4.5.2 Meetings

Research team meetings (both within the broader WRC project and through interaction with other research teams) provided an opportunity to gather the insights and experiences of other researchers and technical specialists involved in the process of NWA implementation, as well as members of the DWAF and WRC.

My role in these meetings was as an active participant, and occasionally also organiser, in which case I was also responsible for taking part in planning the meeting, and for documenting and synthesising proceedings. No audio recordings were made of meetings, but notes were taken by myself and at least one other member of the research team, and both of these sets of notes used to prepare reports on meetings which were then circulated for comment to all who attended.

The most important meetings attended included:

'Croc 2000' (February 2000):

- Held to discuss the coordination of WRM research initiatives in the Inkomati WMA, in anticipation of the initiation of a participatory Reserve determination process for the Crocodile.

'MCDA and Resource Economics' (June 2000):

- Held to discuss the incorporation of Multi-Criteria Decision Analysis and Resource Economics tools in participatory Reserve determination processes, and to share insights emerging from related research projects.

Meeting of WRC project team with DWAF (October 2000):

- Held to discuss outcomes of the first two stakeholder workshops with interested members of DWAF.

Guidelines for participation – consensus workshop' (May 2002):

- Held to discuss practitioner, DWAF and researcher perspectives of guidelines/principles for participatory Natural Resource Management.

4.5.3 Interviews

Semi-structured interviews were conducted with a variety of role-players with the purpose of verifying, adding to, and potentially challenging, perceptions that had been developed through the other research techniques listed, of both the specific participatory processes studied, and of participatory processes in general. Discussion was guided toward delivering the contents of a 'checklist' of the information desired (Table 4.1). However this 'checklist' was not prescriptive of the exact questions asked of each interviewee, and did not prohibit the pursuit of additional issues where this appeared to be appropriate.

Informal, semi-structured and unstructured interviews offer several advantages over more standardised interviews or survey questionnaires. Open-ended questions can be used to gain a deeper understanding of an individual's perceptions and experiences. A flexible format allows the interviewer to pursue a different line of questioning (and use wording and phrasing) appropriate to a particular interviewee. Non-directive questioning allows the interviewee to focus on the issues to which they attach the most relevance, enabling the interviewer to understand their interpretation and perspective better (Morison, 1987). Because of its qualitative nature, in semi-structured and unstructured interviews there is also a greater potential to interpret individuals' contributions in their appropriate social context.

Selection of interviewees followed a 'purposeful sampling' approach (Maxwell, 1996 p. 70; Creswell, 1998). Interviewees were chosen to represent a variety of positions, roles or perspectives, and also for their accessibility and willingness to be interviewed. Where possible, interviews were recorded and later transcribed.

Interviewees included:

- (6) Stakeholders (resource users from the Inkomati);
- (3) Members of DWAF (1 Regional Office; 2 National Office);
- (1) Member of a Non-Governmental Organisation currently involved in assisting with participatory processes for IWRM;
- (1) Private consultant employed by DWAF to facilitate public participation processes;
- (1) Researcher/specialist working on projects related to participatory decision-making processes for IWRM.

The number of interviews that could be conducted was limited by the time and resources available for this research, and the willingness and accessibility of suitable interviewees.

However, the interviews played a secondary role to the other, more intensive, data collection methods used, and the number and range of interviews conducted was considered to be adequate to this role.

Table 4.1: Checklist used to direct semi-structured interviews, of procedural elements of participatory processes: Questions refer to both respondents' perspectives of (based on past experience) and preferences for (based on wishes expressed for future experiences), elements of participation

Theme	**Procedural elements**	**Aspects of participatory process asked about / examples of questions**
Power/influence	Degree of power-sharing between government and stakeholders.	- Degree of power-sharing intended vs what is achieved and why.
	Power imbalances between participating stakeholders.	- Degree of power-sharing intended vs what is achieved and why.
Agenda/scope of discussion	Who sets the agenda for discussion?	- Does government set the agenda and scope of discussion or do participants have an input?
	What is relevant?	- Extent to which process and discussion focus on ecological/social/economic issues. - Degree to which contextual framework is provided by government vs participating stakeholders.
	Fixed vs flexible agendas.	- How rigid is the agenda once set? - How adaptive is the ongoing participatory process?

Role of specialists and technical knowledge.	Interaction between specialists and stakeholders.	- Nature of language, terminology used by specialists. - One-way ('teaching' or extractive) relationship vs mutual learning.
	How is decision about a Desired Future State/Management Class/Reserve presented?	- 'Water' is the resource vs 'ecosystem is the resource'. - 'For people' vs 'for Nature'. - Distribution of costs and benefits vs. optimising benefits at a catchment scale. - Including social, economic and ecological goals/impacts?
	Availability and accessibility of information and nature of feedback to participants.	- What kind of language and terminology is used in written reports on the process?
Capacity	Degree and type of capacity building required for successful participation.	- What technical knowledge is necessary? - What skills are necessary?
Representation	Representation and accountability.	- How do people know they can take part? - What are/should they be told re their influence on the final decision? - Who takes part? - How are they made accountable? To whom?
Nature of decision-making process	Consensus vs conflict.	- What does the Act's requirement for consensual decision-making imply? - How does the requirement for consensus influence the process of debate and decision-making? - What is the role of conflict and how is it dealt with?

4.5.4 Case studies: Participant observation; review of documentation

Direct observation of DWAF's current implementation (of aspects of the new water law) provided an essential first-hand experience of participatory processes and the contexts in which they occurred. The processes of stakeholder consultation undertaken for the Inkomati and Olifants WMAs were studied by direct observation, through attendance of meetings as a non-contributing participant. All meetings held for the final year (2000) of the Inkomati CMA proposal process were attended. For the Olifants Reserve determination process it was unfortunately only possible to attend one meeting. At the time this study commenced only three of the total of nine meetings for the Olifants participatory process had not yet taken place. Permission to attend the first meeting was denied, permission to attend the second was granted, and no notification was received of the third until after it had taken place.

Minutes of meetings (including those attended) were used to investigate the overall stakeholder consultation processes undertaken for the Inkomati and Olifants WMAs. Though these do not adequately reflect the content of events, they provided some access to meetings held in the earliest stages of consultation, or that could not be attended for various reasons. Documents were used to access specific information about the content of processes (e.g. attendees, venues, presentations made, agendas, feedback from previous meetings and issues, venues, decisions made, responses to issues raised) and to cross-check information from other sources.

Authorship, purpose and style of documentation were highly inconsistent over the course of both case study events, and no formal analysis of the minutes as documents was attempted.

4.6 Data analysis

"In qualitative analysis, data collection and analysis go hand in hand to promote the emergence of substantive theory grounded in empirical data" (Marshall and Rossman, 1995 p. 112). Qualitative data analysis usually begins immediately, and is ongoing (Maxwell, 1996; Neuman, 2000), to enable early insights to guide future inquiries. This was particularly important given the broad initial scope of this research, which required that the focus of this research adapt to the understanding gained through earlier investigation.

Throughout the course of this study I kept a journal of experiences and incidents and the ideas and interpretations inspired by these. This also served to document the changing focus of research and the re-interpretation of previous experiences in the light of new data. In qualitative methodology this process is referred to as the writing of 'analytic memos' (Maxwell, 1996; Creswell, 1998; Neuman, 2000; Marshall and Rossman, 1995). Writing these memos was a way to both record and facilitate reflection and analysis. Not only do memos

capture analytic thinking about data, they also "facilitate such thinking, stimulating analytic insights" (Maxwell, 1996 p. 78). In addition, the process of listening to recordings of workshops and interviews, and transcribing them, was another opportunity for analysis. In this process one can produce notes and memos and "develop tentative ideas about categories and relationships" (Maxwell, 1996 p. 78). As this research formed part of a larger research project being undertaken by a research team, meetings of this team offered the opportunity for group analysis and feedback on tentative interpretations of events, and discussion of emerging issues and explanations.

Similarly, at various points in the research process, it was necessary to produce more formal written products than the more personal and informal 'memos', in order to provide feedback to participants (e.g. for the workshops and meetings), or to report back to the funders (i.e. the WRC). In addition, two papers were written for presentation at conferences at various points in the overall research process (one on the Inkomati case study, and one on the model of alternative approaches) and the presentation of these papers was used to generate feedback that contributed to future analysis. These reports/papers, and the analysis leading up to them, were geared toward the different objectives relevant to the research phase at the time. Interim analysis focused on the evaluation of current implementation through the case studies (Objective 1), and the assessment of the range of role-player perspectives. Finally, when the data collection phase was complete, the entire data set could be analysed to address the second and third objectives, and to integrate and express these findings in this thesis.

By the time of completion of the data collection phase the full data set thus comprised both the data and products of its interim analysis, as follows:

Workshops

- Notes that were taken of proceedings, both by myself and another member of the research team. These were supplemented by notes added while listening to the audio recordings of the workshops.
- Flipcharts, summarising participants' contributions for particular questions, the content of which had therefore been read and modified where necessary in the workshop, and by the participants themselves.
- Syntheses of the workshops.
- Written communication from participants after the workshops.
- Questionnaires administered to participants after the second and third workshops.
- Memos written in preparing for, and reflecting on, the workshops, and discussions held about the workshops by the research team.

Meetings

- Notes taken of proceedings, both by myself and another member of the research team.
- Syntheses or reports of proceedings.
- Memos written in reflecting on meetings, and in preparing for research team meetings.

Interviews

- Transcripts of interviews, where recorded, and/or notes taken by myself and another member of the research team, who was present for all but 2 of the interviews.
- Memos written in reflecting on interviews.

Observation of case study participatory processes

- Notes taken of proceedings, and the documentation provided to participants at meetings.
- Memos written in reflecting on meetings.

Documents arising from case study participatory processes

- A complete set of minutes and reports for the Olifants Reserve determination process. Due to the lack of observational data for this case study, the documents were studied to build a sequential picture of the process. In studying the documentation, summaries were made of the most relevant aspects of proceedings (given the decision to focus in this case study on the decision-making process and interaction between specialists and stakeholders). This process of 'data reduction' was required to enable easier access to this data for future analysis. Part of this summary was in the form of 'memos' written in response to studying the minutes.
- A complete set of available minutes for the Inkomati CMA proposal process, as well as a DWAF summary report on the process. This was far more extensive than the Olifants data set, and only became available late in the research process. For these reasons, and because the Inkomati case study was also studied through observation of meetings, interviews and workshops with participants, the Inkomati minutes were examined less intensively than the Olifants minutes, and were mainly used to verify specific information from other sources, and scanned to search for content on specific issues, identified through other methods.

Creswell (1998) recommends that an important first step in analysing any qualitative data set is obtaining a "sense of the overall data" (p. 140) by reading through the entire data set several times. As qualitative data sets are usually extensive to the point of being unmanageable in their 'raw' state, some form of 'data reduction' (Marshall and Rossman, 1995) is then applied to enable detailed analysis, usually through a process termed 'coding'. Coding is a process of "identifying themes or concepts that are in the data" (Ezzy, 2002 p. 82). Coding is used to "fracture" data and rearrange it into categories that facilitate comparison "within and between these categories and that aid in the development of theoretical concepts" (Maxwell, 1996 p. 78) and thus "links the data to an emergent theory" (Ezzy, 2002 p. 82).

In this study a form of preliminary or informal coding (essentially the 'open coding' phase of a 'grounded theory' coding sequence) was applied to the data, guided by the themes emerging from the data themselves, and also by the issues identified in the theoretical framework, and expressed in the case study evaluation framework for this study (Table 2.1), and the interview

checklist (Table 4.1). No further coding or re-assembly of the data using these codes was attempted, as the data set was considered to be manageable in its informally coded state. It was also considered important to retain the full breadth and variety of the data set. This variety of the data set (of context, role-players, cases, conceptual levels/scales) resulted in limited potential for data reduction. Coding merely allowed me to find evidence relating to particular themes while scanning the data, which were left in context.

This informal coding process was applied to most of the data set, i.e. transcripts of interviews, workshop notes, meeting notes, observation notes, analytic memos, and the summary of the minutes for the Olifants Reserve determination process.

The process of analysis and synthesis undertaken in this research can be summarised as follows:

- Ongoing analysis during data collection through keeping a journal and recording responses to findings in analytic memoranda.
- Interim analysis geared toward specific products, required to provide feedback to participants, peers or funders, and toward the objectives and phases of this research, i.e. documenting perspectives and assessing case studies of current implementation. This involved informal coding of parts of the data set to identify and easily find evidence for particular themes and to address the different interim objectives.
- Examination of the full data set to provide a 'sense of the whole'.
- Informal/open coding of the full data set (with the exception of the Inkomati minutes).
- Integration of the findings with regard to 'role-player perspectives', and evaluation of the case studies, using themes emerging from the coded data, and the relevant literature, to develop a model of alternative approaches and outcomes (Objective 2).
- Integration of the findings of Objectives 1 and 2, along with 'role-player perspectives' and the literature relevant to these findings, to develop a set of principles and processes for conducting participation in WRM in South Africa (Figure 4.1).

4.7 Validity

'Validity' in qualitative research refers to the "relationship of … conclusions to the real world" (Maxwell, 1996 p. 86). Consideration of the validity of one's research must provide "grounds for distinguishing accounts that are credible from those that are not" (Maxwell, 1996 p. 87).

Maxwell (1996) lists the following potential 'validity threats' to the results of qualitative research. 'Valid description' as a research product is threatened by the potential "inaccuracy or incompleteness" (p. 89) of data. This threat can be addressed to a large extent through the

recording and accurate transcription of events. Production of valid interpretations is threatened by the possibility of the researcher imposing their own framework of understanding or meaning in place of understanding the perspectives of those being studied. Similarly, the validity of theory is threatened when a researcher fails to consider alternative explanations or understandings of events, or fails to collect or pay attention to discrepant data. The phenomenon of 'researcher bias' refers to the "selection of data that fit the researcher's existing theory or preconceptions, or which 'stand out' to the researcher (Maxwell, 1996 p. 90). Though it is not possible or sensible for a researcher to eliminate their own values from their research (Maxwell, 1996; Creswell, 1998; Neuman, 2000) they should be aware of their own framework and assumptions, and attempt to understand how these influence the conduct and conclusions of their study.

Some examples of validity checks include: "searching for discrepant evidence and negative cases" (Maxwell, 1996 p. 94) in an attempt to falsify one's proposed conclusions; triangulation of data from different individuals, settings and methods (Ferreira, 1988; Marshall and Rossman, 1995; Creswell, 1998; Neuman, 2000); soliciting feedback from others, for example through peer review (Maxwell, 1996; Creswell, 1998); soliciting feedback from participants in the research, termed 'member checks' (Marshall and Rossman, 1995; Maxwell, 1998).

The likely validity threats to this research, and the measures taken to counter these, are presented in Table 4.2.

Table 4.2: Threats to the validity of the findings of this research, and the measures taken to counter these

Validity threat	**Explanation/example**	**Counter-measure**
Inaccurate or incomplete data or description	Accounts of events (workshops, meetings, interviews) are inaccurate or leave out information.	Recording and transcription, or notes on the same event taken by at least one other person. Member checking of reports on workshops and meetings. In the stakeholder workshops this was both immediate (through verbal rephrasing of participants contributions by the facilitator, and through recording on flipcharts) and long-term (through written syntheses of workshops sent to participants after the event).

Researcher bias	Researcher imposes own values and framework on data.	Be aware of own values and personal history (e.g. academic background in ecology and childhood in one of the case study areas) and how these might influence interpretation.
	Alternative explanations or discrepant data exist to counter the explanation or theory offered by the researcher.	Look for discrepant data; think of alternative explanations and examine the data to see if these can be supported or refuted. Peer review through research team meetings, and presentations at conferences.
Self-report bias	Workshop or meeting participants and interview respondents give inaccurate accounts of events.	Triangulate workshop and interview data with that from documentation, other's accounts and own observations.
Reactivity	Influence of researcher on participant's statements and behaviour (Maxwell, 1996).	Avoid asking leading questions in interviews, workshops or meetings.

4.8 Ethical concerns

All participants in meetings, interviews and workshops, were aware that these events formed part of this study, and all participants in recorded interviewers had given their consent to this recording.

Feedback to participants is an important ethical consideration in qualitative studies. This was achieved for participants in workshops and meetings through sending them the written syntheses of these events, and inviting their feedback and comment on these. Care was also taken that this research would not be purely 'extractive' but would provide benefits to participants (Ezzy, 2002) through offering a mutual learning experience.

4.9 Conclusion: Presentation and interpretation of results

The three chapters which follow present the direct results and interpretations of the methods of data collection and analysis employed. The perspectives of various role players, gathered through workshops, meetings and interviews, are presented in the next chapter, followed by an assessment of the current implementation of participatory processes in the Inkomati and Olifants case studies (Chapters 6 and 7).

Chapters 8 and 9, the consideration of alternative approaches and the presentation of a recommended approach to participation, are based on the insights developed in these three 'results' chapters, along with the relevant literature.

CHAPTER 5:

PERSPECTIVES OF STAKEHOLDER PARTICIPATION IN PAST, CURRENT AND FUTURE WATER RESOURCE MANAGEMENT

5.1 Sourcing perspectives

Participation is all about perspectives – accessing them, integrating them (Pretty, 1995), and ultimately even changing them (Costanza and Folke, 1997; Smith and Wales, 1999).

The range of methods employed across the duration of this project delivered a variety of perspectives and insights about the context, priorities, purpose and process of past, present and future water resource management in South Africa. These included the perspectives of government, stakeholders and practitioners, and provided the raw material from which objectives 1 to 3 and the findings reported in chapters 6 to 9 were developed.

Though all methods delivered some insights into the perspectives of various role-players, the workshops played a central role in sourcing stakeholder perspectives, whereas meetings and interviews were the main source of inputs from government and practitioners. However, the workshops were also designed to deliver other outcomes (as detailed in Chapter 4, Section 4.3.1) and, for the sake of completeness, these will also be reported on here. In particular, workshops formed the main action research component of this study.

This chapter will therefore be structured as follows:

- Workshops and stakeholder perspectives.
- Report back on action research.
  (This is limited to workshop participants, as assessment of this aspect of the project was only conducted via the workshops.)
- Government perspectives.
- Practitioner perspectives.

Three workshops, with stakeholders from the Inkomati WMA, were held between July 2000 and July 2001. (For information on workshop participants and logistics, and the overall approach and method used in these workshops, refer to Chapter 4, Section 4.3.1.) In summary,

the first workshop was aimed at developing an understanding of context, the second focused on the process of determining a vision for a Desired Future State of a water resource, while the third addressed the issues of representation and communication.

5.2 Stakeholder perspectives: Workshop 1

The first workshop in the three-workshop series was held on 3 and 4 July 2000, and was attended by 17 stakeholders, in addition to the project team.

The first workshop was primarily an exploratory process, for both the team and the stakeholders. This workshop served to surface the main Water Resource Management issues of concern to participants and thereby build shared understanding of the context of WRM from stakeholders' perspective. Allowing open discussion of the most serious concerns and grievances helped to expose the research team and all participants to each other's positions and perceptions. We then used the frustrations surrounding these issues to get stakeholders to think about the principles of a WRM system that would be able to address these issues, or prevent them in the future. This served to illustrate the opportunities a vision-building process, and a participatory management system, which generates shared vision among catchment stakeholders, could hold for addressing these concerns. This exercise gave us a shared vision for the operating principles of a future management system. This vision became the framework for all later discussion, and a central feature of the workshop process.

5.2.1 Perspectives and outcomes: A shared context – issues relevant to WRM in the Inkomati

Stakeholders raised a broad variety of issues and concerns linked to the broader context of WRM in the Inkomati WMA. 'Previously disadvantaged' participants tended to focus on issues such as allocations and equity, and the supply of domestic water and sanitation. The 'previously advantaged' tended to focus on concerns about increasing costs and the security of their current water use in the future. All participants expressed concern for the future of the water resource, because they could see that it was declining in quantity and quality and that demand was increasing. All participants were also experiencing much confusion and uncertainty over the implications of new legislation. This sentiment was expressed most strongly by the emerging farmers who related their experiences of attempting to obtain a permit to abstract water in areas formerly administered as 'homelands', and their perceptions of being shunted back and forth between DWAF and the provincial agriculture department.

The response to this exercise illustrated that the context of WRM from stakeholders' perspective is very broad. 'Water' is a term and concept which is able to evoke a number of issues, ranging from basic needs such as domestic water and sanitation services, to issues of development and the economy, and including issues relating to land use and land reform.

Participants' description of the WRM context was summarised as follows:

Policy and legislation:

- Lack of clarity about new legislation and conflicting interpretations of its implications.
    - Future government ownership of dams that were previously privately owned.
    - The implications of previous scheduling statuses / water rights of redistributed land, and the criteria for classification as an "existing water user" under the Act.
- Lack of clarity about interim procedures to be followed.
    - Rewarding of a temporary licence prior to the determination of the Reserve.
    - Concern about the protection of historic investments under the new legislation.
    - Concern about future pricing strategies.
    - Whether agriculture and forestry will pay a greater proportion of total catchment management costs than is warranted by their use.

Resources:

- The scarcity and finite nature of water resources and the variability of their supply.
    - A noticeable long-term decline in the level of rivers, and the severity of the effects of recent droughts on water users.
    - Threats to rivers and ecosystems from pollution and poor land use.
    - Increasing demands for water, and the need for reallocation of the resource.
    - Growing populations, and a large number of emerging farmers who require access to water.
- The need for quantification of the total resource, the Reserve and the amount available for allocation.
- The urgency of a preliminary estimate of the allocatable amount to enable economic activity to continue.
- The need for a system to monitor the resource and manage its use.
- The need for long-term vision at the catchment scale to ensure sustainability and an optimal balance between use and protection of the resource.
- The need for a holistic approach to integrate the use of land and water, and social, economic and environmental goals.
- The need for strategic and informed decision-making.

Administration:

- Delays in the transfer of land ownership.
    - Status of farmer must progress from 'permission to occupy' to title deed holder in order to obtain an allocation of water.
- The need for integrated and democratic management systems.
    - CMC members must have a mandate from the people they represent.

- The role and responsibilities of community-based/local organizations within the overall management system.
- The need for co-operative governance, both vertically – between the different levels of government, from local to national – and horizontally – between government departments (in particular DWAF, Dept. of Agriculture & Land Affairs, Dept. of Environmental Affairs & Tourism), between user sectors and geographical areas, and to involve the broader community.
    - Lack of co-operation between the departments of Water Affairs and Agriculture in allocating water to emerging farmers.
- Uncertainty about licensing procedures.

Capacity / Empowerment:

- Researching and using indigenous knowledge.
    - Consulting tribal elders about water conservation methods.
- Inadequate extension services.
    - The need to advise emerging farmers about farming methods, and about administrative procedures involved in applying for a license to use water.
- Empowering and educating the community, especially through women and youth, about better resource use.
- The need for both mutual and professional support.
    - Government should encourage mentoring by experienced stakeholders of new stakeholders.
- Instilling a sense of 'ownership' of resources, and responsibility for their protection.

Technology:

- Methods of saving water or using it more efficiently.
- Improved farming practices.

5.2.2 Perspectives and outcomes: Principles of a future WRM system

Workshop participants agreed that one of the limitations of the previous management system was that it only made use of a 'top-down' approach, and that in the future a 'bottom-up' approach was also required. The workshop discussion identified some of the properties and principles of a new system of organization for both 'bottom-up' and 'top-down' management processes. These were as follows:

A more holistic approach:

- A shared resource requires a common vision and commitment to coordinated action.

Greater integration:

- Linkages between land and water, upstream and downstream resource use, and social, economic and environmental goals must be created.

Co-operative governance:

- Working partnerships must be built both vertically – from local to national level, and horizontally – between different sectors, regions and communities, and between government departments.

Equity:

- There should be equity in access to the resource, and in the distribution of the costs and benefits of resource management, use and protection.

Efficiency:

- The management and administrative processes must be efficient in their use of human resources, finance and time, and work toward speedy and efficient service delivery.

More informed civil society:

- Civil society should be informed and active, and a sense of shared ownership, responsibility and accountability must be created.
- Special effort must be made towards ensuring that marginalised groups are able to participate effectively.

More adaptive policies and processes:

- Management policy and processes must be able to adapt to changing needs, and to improve over time by learning from experience.

5.2.3 Workshop 1: Process principles and lessons learnt

The first workshop provided insights into the context of WRM from stakeholders' perspectives, and also suggested the principles by which a participatory management system should operate. In addition, the workshop process developed the research team's perceptions of the approach to facilitating group interaction, in a workshop setting. This workshop illustrated, in particular, the value of allowing for a broad, exploratory initial phase, in which participants have the opportunity to express the most important issues that they consider relevant to the workshop process and purpose.

These issues' have both a 'content' role, and a 'process' role. Discussing people's most important 'issues' (regardless of the specific purpose of the event or its organising agents) enables the development of a shared context (content role). Building a shared context in this way is important in enabling a holistic approach, and in the opportunity it provides for the participants, and not only the researchers (or government, in the case of participatory processes), to frame the issues for debate. In addition the context-building process allows people to 'air their grievances', allowing others to hear and understand their specific perspectives and problems.

Building context takes time, but allowing and encouraging the discussion of those issues of most urgent concern to participants, at an early stage, also facilitates the focus of later processes, through reducing the number of issues that resurface in subsequent discussions. Though a process of raising 'issues' can tend to focus on, and become entangled in, attempting to address isolated and often intractable 'problems' of the present, this can be avoided – issues experienced as negative can be given a positive role when they are used to design a vision for the future which can deal with them, or in which they are no longer a problem.

5.3 Stakeholder perspectives: Workshop 2

The second workshop was held a month after the first, on 27 and 28 July 2000. It was attended by 17 stakeholders, in addition to the project team. In the second workshop we narrowed the broad, catchment-oriented focus developed in the first workshop, to look more closely at rivers, and the process of building a vision for their use, management and protection. The research team chose to focus on this aspect as the next step, after the development of a shared understanding of 'context', in a resource management process. Under the NWA, the vision for a desired future state of a river system inspires and constrains all future management decisions, and the process of determining this vision is thus arguably the most important step in the overall resource management cycle.

Describing ecosystem 'goods and services' (Daily, 1997) offers an alternative to technical descriptions of physical and ecological parameters in defining a Desired State that is relevant to all stakeholders. We used a field-based exercise to gauge the potential usefulness of 'goods and services' as a common currency for discussing the costs and benefits of resource use and protection. This exercise included discussion about the perceived distribution of these benefits, and the displacement of costs to other users, or other regions, which often results from using various river goods or services. Finally, a broad vision-building exercise was conducted which produced a high-level vision or mission statement for the workshop group.

Using these two exercises, the second workshop was able to access stakeholder perspectives on two key concepts:

- The different goods and services perceived to be offered by water resources, and which have different values for different stakeholders.
- A vision for the broad values, goals and priorities of a future resource management process.

These are described in detail below.

5.3.1 Perspectives of aquatic ecosystems as providers of beneficial goods and services

The following potential goods and services listed by stakeholders who were taken to two sites, river and wetland, on the White River system.

Goods provided by rivers:

- Water.
    - Urban use.
    - Irrigation agriculture.
    - Medicinal use.
- River sand.
- Fish.
- Food plants.
- Craft plants.
- Medicinal plants.
- Timber from riparian trees.
- Fruit from riparian trees.

Services provided by rivers:

- Provides habitat for aquatic organisms.
- Maintains biodiversity.
- Purifies water.
    - Assimilative capacity can be used to treat waste.
- Flood attenuation.
- Mediates droughts.
- Aesthetic qualities/scenic beauty.
- Recreation.
    - Swimming.
    - A place for picnicking.
- Forms a natural barrier.
- A centre for social and economic development.
- A place to perform cultural and religious ceremonies.
    - Baptisms.
- Transport route.
- Energy can be harnessed.

Goods provided by wetlands:

- Clay, for making pots, bricks.
- Peat.
- Reeds, for crafts and cultural ceremonies.
- Worms and frogs, used as bait for fishing.

Services provided by wetlands:

- Flood attenuation, wetlands act as sponges.

- Filters and purifies water.
- Provides a place to grow crops.
- Forms a natural barrier to the free movement of people and animals.
- Can be used as a firebreak.

Discussion of goods and services after the field trip included concerns about the declining variety and abundance of goods and services in people's local rivers, particularly declining supplies of indigenous fruits, herbs and fish. There was also discussion of the costs of using different goods and services, for other users, or for other regions. Using particular goods and services has benefits, but also involves costs, and can result in the loss of other potential goods and services, e.g. growing crops in the wetland can drain the wetland, which can then no longer act as a sponge to prevent flooding; use of the river's assimilative capacity for treating waste, can prevent others from using the river for swimming, fishing or fetching drinking water.

5.3.2 A vision for the use and management of local water resources

The second exercise in the workshop was conducted to encourage people to express their vision for local water resources/rivers, and the broader Inkomati WMA. Based on the aspirations expressed we were able to identify a number of areas over which agreement at the broad catchment scale could potentially be reached.

Aspirations expressed by participants in this exercise again reflected the broader context of IWRM, and included visions for both river and land use, the need for social and economic development, and a commitment to both equity and sustainability in resource use. These were as follows:

Land use:

- Healthy banks.
- No erosion.

River use:

- Healthy, beautiful river.
- Maintain biodiversity, and use its benefits.
- Maintain supply of indigenous fruits, crops and medicines.
- Rehabilitation beyond conservation areas.

Development:

- Provide employment that benefits local people.
- Provide basic services.
- Cultural and recreational tourism development.
- Agricultural development.
- Using some of the resource's assimilative capacity to support development.

Equity:

- Equitable access to the resource.
- Equitable distribution of costs and benefits.

Sustainability:

- Maintain health of resource, and profitability of economic activities.
- Protect our children's heritage.
- Environmental capacity known and respected.
- Future options not foreclosed.
- Transparency and accountability to achieve a sustainable management system.

These aspects were then drawn together into a statement that reflects the aspirations we share for the future of our resource. A suggested vision or mission statement for our workshop group was then expressed as follows:

"We are proud custodians of our rivers.
They sustain our economy and heritage.
We protect and manage them so that they can continuously bring benefits equitably to our people, the nation, and our neighbours."

5.3.3 Workshop 2: Process principles and lessons learnt

The second workshop illustrated the potential value of two principles for facilitating group interaction and discussion in decision-making for IWRM.

Firstly, the workshop discussion of 'goods and services' illustrated that stakeholders perceive rivers and other water resources in broader terms than just 'water' for abstractive use, and that the concept of ecosystem 'goods and services' offers a common currency for discussing stakeholder needs and values for water resources. In a Desired Future State process to inform a Reserve determination, translation will need to take place from ecological variables to resource use variables, if the process is to have meaning for stakeholders. Effective translation will require that the technical team determines and communicates the implications of various ecological parameters for the supply of river ecosystem goods and services.

Secondly, the workshop illustrated the value of a long-term vision building process in enabling diverse groups to reach agreement on common goals. However, if it is to be equitable, a vision for the outcomes of successful WRM must address both the costs and benefits of resource use (considering the full range of goods and services of value to different stakeholder groups), and the distribution of these across stakeholder sectors and catchment regions.

5.4 Stakeholder perspectives: Workshop 3

The third and final workshop was held a year after the first, on 19 July 2001. It was attended by 16 stakeholders, in addition to the research team.

The third workshop chiefly aimed to reach closure of the workshop series, but at the same time sketch a way forward for all participants, who must continue to engage the ongoing process of participatory water resource management. We also aimed to address the key issue of communication – both within and across the various scales of representation for IWRM. The challenge of representation, feedback and communication was identified by participants in both the first and second workshops as a key issue limiting the success of stakeholder participation in WRM. Similarly, attention to cooperative governance at all levels was identified as an operating principle for a future participatory WRM system.

Finally, as this workshop was held almost a year after the first and second workshops, it offered the opportunity for reflection on what everyone had learnt from the workshops and also from trying to put the workshop principles into practice. These will be discussed in section 5.5 (Action Research).

5.4.1 Perspectives on representation, communication and feedback

Though participants had attended the workshops in their own capacities, and not as representatives of particular constituencies, we had encouraged them to gather the views and inputs of their sectors or communities. This many of them had done, calling meetings and collecting verbal, and in some cases even written, reports. In addition everyone at the workshop was already involved in communicating with one or more groups of people – to diffuse information from these workshops, to transfer information to and from the broader DWAF consultation process, or as part of other land and water-related projects in which they were involved.

We tried to learn more about the process by which this communication and interaction, both within and across the different levels of organisation, takes place. The following points emerged from this discussion:

Information is communicated in a variety of directions, and to a variety of recipients:

- Information is communicated up (from the 'bottom', e.g. making a submission to the Inkomati CMA proposal process), down (from the 'top' e.g. representatives report back to their constituencies about meetings they attend) and sideways (e.g. a farmer's group in one area communicates information received from DWAF to a similar group in another area). Each level of representation and management needs to communicate in all of these directions to be effective.

People make use of a number of forums and platforms, and communicate to a variety of groups:

- Groups that workshop participants have been involved in communicating with include: Local Government, Tribal Authorities, political groups, SANCO, non-governmental organisations, Working for Water, Land Care, Water Boards, women's groups, Irrigation Boards, emerging farmers' groups, and local Water Committees. Existing platforms or events such as 'Farmers' Days', weekly meetings of various forums, and government extension services, such as 'Information Satellites' offer opportunities for people to communicate with all of these groupings. Sometimes people are invited to speak at these meetings; at other times they have to find opportunities to address meetings that are being held for other purposes.

Current communication practices face a number of challenges:

- *Limited resources:*
  This is a particular problem for people who do this work as volunteers. Transport costs are a major limitation for them, and also keep local people from attending meetings.
- *Limited opportunities / platforms:*
  Usually it is not possible to call a meeting for one's own purposes, and one must wait for another opportunity to arise.
- *Difficulties getting the message across:*
  Many of the people who need to be reached are illiterate, or have little formal education, and find it difficult to understand messages about water resource management processes, especially when these deal with things that are new and complex.
- *Opposition and conflict:*
  Some people are opposed to the message one brings, or will only accept contributions from a particular organisation. Existing conflicts can make it difficult or impossible to communicate with certain groups or to discuss certain issues e.g. conflicts between Tribal Authorities or political parties.

Workshop participants made the following suggestions as to how communication can be improved in the future:

- Make better use of existing structures and forums e.g. Community Development Forums.
- Improve relationships between existing structures.
- Look for new opportunities to communicate through existing structures and platforms.
- Share learning about how to organise ourselves and communicate more effectively. Even if one gets opposition to one's message, one should keep the channels of communication open.
- Access more resources to support communication.

5.4.2 Workshop 3: Process principles and lessons learnt

The third and final workshop offered valuable insights into participants' views on the issue of representation and communication – this is essentially their key role in the overall participatory WRM system, and one on which they are uniquely qualified to comment.

It was clear from participants' responses that representatives who are used in government's participatory processes are given huge responsibilities, and little support to carry these out. They have to give feedback to, and communicate with, large numbers of people, and have no additional resources supplied for this. One means to facilitate this feedback is for representatives to recognise that there are already a large number of organisations and communication channels that can be used. It is not always necessary to initiate new forums specifically for water resource issues.

The opinion was expressed that government, as the manager of participatory processes, needs to pay attention to the issue of representation. There needs to be monitoring and evaluation of the 'feedback' component of participatory processes. The issue of what happens after (and before) a meeting should be of equal concern as the contents of meetings. One cannot assume that what happens in meetings goes any further than the meeting. Communication must be specifically targeted, and evaluated to improve accountability of representatives, and to develop strategies for improving future processes.

The third workshop also played an important role in achieving closure for the research team's intervention in participatory experiences of WRM in the Inkomati. For this intervention to have had value, both for participants and for the future sustainability of WRM in the Inkomati, it was essential that it inspired action, and changed behaviour. An assessment of the extent to which the intended 'Action research' process had achieved both change and action, was undertaken and is reported on in the next section.

5.5 Action research

One of the objectives of the workshop series was to undertake a process of 'action research', to assess the capacity which already exists to engage a participatory WRM process, and how and whether this capacity can change through exposure to a facilitated, interactive process.

Capacity was informally assessed by observing stakeholder interaction in a workshop setting and by their reported experiences in engaging government processes and procedures. Questionnaires were administered after the second and third workshops to gain insights into what stakeholders felt they had learnt, if anything, and the degree to which they felt their knowledge, views or attitudes had changed.

Workshop 3 also involved a feedback session on what people had learnt and how they had put this learning into action in the one-year period between the second and third workshops.

5.5.1 Assessing the capacity of workshop participants to engage a participatory water resource management process

It was apparent from their comments and contributions, from the start of the workshop process, that the majority of participants already had a good understanding of basic catchment management concepts. This is probably as a result of their exposure to other capacity building programmes such as the Save the Sand project (Pollard *et al.*, 1998). However, most participants displayed a fairly poor understanding of the experiences of other sectors – how other stakeholder groupings use water resources, and what their constraints, needs and values are. Nevertheless they recognised and seized the opportunity to learn from and about other sectors at the workshop. In particular, all participants displayed a hunger for information, about policy and government's administrative procedures, and about technology that could help improve their lives and livelihoods.

Everyone attending the workshops showed considerable enthusiasm and energy to get involved in activities related to 'water' and 'land' and to start initiating action (to organise themselves, engage their communities, and engage government and various administrative processes) as soon as possible. In addition, it was evident that many workshop participants put a lot of effort into communicating what they find out at meetings and workshops to their communities. There is interest from their communities and therefore pressure to do so. Participants appear to be innovative in their use of communication channels organised around issues other than water.

5.5.2 Building capacity

In the final workshop we discussed some of the most important lessons that all of us – both stakeholders and the research team – had learnt through our participation in the workshops, and also in the broader processes of Water Act implementation that many of us had been involved in.

These lessons were summarised as follows:

The value of our rivers and other water resources:

- Rivers are more than just water.
- Rivers provide us with a variety of goods and services.
- How healthy or unhealthy our rivers are has an effect on all of our lives.
- Rivers provide a heritage for our children.
- Water cannot be free, because managing rivers requires resources.

Everything in the catchment is linked:

- Land use and rivers are linked.
  e.g. Ploughing right next to the river, or cutting down trees on the riverbank, increases soil erosion, and causes silting up of rivers.
- Different parts of the water resource are linked.
  e.g. Underground water (springs, wells and boreholes) and wetlands (marshes, swamps) are linked to rivers.
- Our actions as individuals have consequences, for other places on the river, and for other people.
- Decisions about water have to be integrated with decisions about land and development.

The need for communication and cooperation:

- Communication is vital to successful resource management.
- We need to work together.
- We are all learners.
- Understanding others' needs and values can cause us to change our behaviour.
- There is an urgent need for cooperative governance at all levels.

The value of vision:

- Focusing on the future helps us to reach agreement without conflict.
- Even where there are large differences in people's needs and values, they can find common ground and develop a common vision.

The importance of a people-centred, 'bottom-up' approach to management:

- Local people have daily contact with their resource, and need to participate in decision-making about its management.
- Everyone has a role to play.
- We need to recognise and support the governance system that has been put in place.
- People can also do something for themselves, and to engage 'top-down' governance or management processes.
- Local people can develop a 'vision' for their resource, and then consult the 'experts' to help them achieve it.
- A sense of ownership of water resources needs to be created. Ownership implies responsibility and requires accountability.

Participation in the workshops gave stakeholders an improved understanding of the new water policy, and the potential of a new, integrated, decentralised and participatory resource management system: the opportunities this presents to them, their role within it, and ultimately their responsibility to help make it happen. It was clear that several participants had failed to gain this understanding despite their involvement in three years of consultation toward the establishment of a CMA.

Feedback from participants (after workshops 2 and 3), in the form of questionnaires regarding the achievement of the workshops' capacity building goals, was overwhelmingly positive. In particular, stakeholders indicated their improved understanding of the values other sectors place on the different goods and services provided by rivers, and of the needs and problems of other sectors and regions within the catchment.

Some examples of stakeholders' comments were as follows:

- "As an emerging farmer, I see more why we need to protect our rivers"
- "As an induna organiser, I have gained valuable knowledge about CMA intention."
- "I will take this as a challenge to the community we need to organise ourselves as a community. Also to be self-reliant."
- "This workshop enabled me to meet and get to know better other members of the future CMA."

The relevant results of these two questionnaire exercises are presented in Tables 5.1 and 5.2 below.

Table 5.1: Summary of participant responses to questionnaire administered to rate the effectiveness of the second workshop, held on 27 and 28 July 2000

Aspect of workshop effectiveness	**Rating (% of respondents)**
Did the workshop improve your understanding of how different water user sectors value the river?	Greatly (100%) Moderately Not at all
Did the workshop improve your understanding of the range of goods and services provided by river systems?	Greatly (94%) Moderately (6%) Not at all
Did the workshop improve your understanding of what needs to be done to develop a shared vision needed to sustain the future state of river/resource protection?	Greatly (94%) Moderately (6%) Not at all
Did the workshop help prepare you to contribute to water resources management?	Greatly (94%) Moderately (6%) Not at all
Did the workshop assist you to understand the intention of government in water resources management?	Greatly (88%) Moderately (12%) Not at all
Did the workshop help you to appreciate other people's interest and values?	Greatly (100%) Moderately Not at all
Did the workshop assist you to communicate the intentions of the Water Act to your community?	Greatly (94%) Moderately (6%) Not at all

Table 5.2: Summary of participant responses to questionnaire administered to rate the effectiveness of the third workshop, held on 19 July 2001

Aspect of workshop effectiveness	**Rating (% of respondents)**
Has your participation in this workshop influenced your thinking and actions with respect to integrated river management?	Don't know Not at all Moderately (17%) Indifferent Greatly (8%) Very greatly (75%)
Has the workshop contributed to your appreciation of the principles and processes required to support stakeholder participation in river management?	Don't know Not at all Moderately (17%) Indifferent Greatly (25%) Very greatly (58%)
Has the workshop enhanced your understanding of "top-down" and "bottom-up" processes in relation to river management?	Don't know Not at all (8%) Moderately (8%) Indifferent Greatly (17%) Very greatly (67%)
To what extent has your participation enabled you to envision the role stakeholders could play in integrated river management?	Don't know Not at all Moderately (17%) Indifferent Greatly (25%) Very greatly (58%)
To what extent has your participation helped you to appreciate actions necessary to promote integrated river management at the community level?	Don't know Not at all Moderately (8%) Indifferent (8%) Greatly (16%) Very greatly (58%)
To what extent has your participation enabled you to facilitate other institutions or individuals to engage the process?	Don't know Not at all (8%) Moderately (17%) Indifferent Greatly (25%) Very greatly (50%)
Have you adopted any techniques used during the workshops?	Don't know Not at all

	Moderately (17%) Indifferent Greatly (50%) Very greatly (33%)
To what extent has your participation provided you with information that you have communicated to your constituency?	Don't know Not at all Moderately (25%) Indifferent Greatly (25%) Very greatly (50%)

5.5.3 Bringing about change

The workshops also helped to improve and establish relationships amongst participating stakeholders, giving them a network to draw on in the future. After the second workshop there were indications that participants had begun to see themselves as a team. They also used the networking opportunity offered by the workshops to deliver consensual recommendations and requests to the CMA proposal process e.g. the recommendation that all those who benefit from river goods and services should contribute equitably to the costs of protecting and managing the resource, i.e. a broadening of the revenue base of CMAs (included in 'written comments on final draft of CMA proposal, distributed at IRG meeting, 8 August 2000). This was initiated and conducted independently of the research team.

We had several requests from participants that the workshops should continue, and a few participants suggested that they cannot take on the tasks that we had discussed without our further intervention. At the same time, however, a sub-group (consisting of three participants) of the workshop indicated their intention to continue working together on the principles and aspirations expressed in the workshop process, perhaps through the formation of a Section 21 company.

5.6 Conclusion: Stakeholder perspectives

The series of three workshops delivered valuable insights into stakeholder perspectives on the context of WRM, the value of water resources, the principles by which they should be managed, and the challenges of representation and communication within a participatory resource management system.

From stakeholders' perspective the context of WRM is very broad, and includes concerns about capacity, technology, development and land reform. Stakeholders are likely to have similarly broad expectations for the scope and focus of participatory decision-making

processes. In the view of stakeholder participants in our workshops, a participatory WRM system must strive for equity and efficiency, requires a holistic, integrated and adaptive approach, cooperative governance, and more informed and empowered civil society. The concept of goods and services is understood, and a variety of river goods and services are valued. Aspirations for the future of the water resource and its management include visions for both the use and protection of rivers, land use, economic development, equity and sustainability.

The stakeholders who attended the workshops had good knowledge about their own interaction with water resources, some knowledge about the new water policy and resource management process, but relatively poor knowledge about others' resource needs and actions. The greatest asset shared by the workshop participants was their desire to learn and enthusiasm to act. These are attributes on which a participatory process, and a future participatory WRM system, can draw.

In the workshops it was demonstrated that a flexible, inclusive and interactive process could allow for the development of greater understanding of others' needs, and the identification of broad common goals for the principles and goals of a future resource management process. Through their involvement in the workshop participants developed a shared appreciation for:

- the value of rivers, for people's lives, livelihoods and heritage;
- the interconnectedness of river catchments;
- the need for communication and cooperation;
- the value of vision;
- the importance of a people-centred, 'bottom-up' process to inform and take part in WRM.

The implications of stakeholder perspectives for the design of participatory processes will be considered along with those of other role-players in the conclusion to this chapter (Section 5.9).

5.7 Perspectives of government

The main interaction with government took place at a meeting held with a number of DWAF officials (5 Oct 2000), in which the project team presented the findings and ideas originating from the first two workshops to DWAF officials and WRC research managers. Participants at this meeting raised a number of concerns about, and expressed diverse views on, participatory processes and the main challenges thereof. These, in addition to views expressed in interviews, and comments made by DWAF officials in various other forums, can be summarised as follows:

Concerns about vision-building and consensus-seeking participatory approaches:

- Broad vision-building processes create unrealistic expectations about what a CMA can and should deliver.
- It can be dangerous to appeal to people's desire for a better future, as they may start to think in terms of their own personal and material gain, not about a better future for all.
- Issue of scale – visions created at a local scale will need to merge compatibly with each other to generate coordinated catchment level vision. Is this possible?
- Consensus-building is a slow process, whereas many catchments have urgent issues needing address.
- Allowing a broad focus for the content of discussion can result in issues-driven processes that fail to produce any outcomes, let alone the outcomes required.

Views about the role of government:

- If people can do things for themselves, what then is there for government to do?
- There are very powerful stakeholders, who may have no concern for the common good, who can overwhelm the needs and inputs of particularly the previously disadvantaged. Government has to be the ringmaster/referee to protect their interests.

Perceptions of the main challenges facing a future participatory management system:

- Participation and empowerment are contingent processes. Participation is a means to empowerment, but often stakeholders are not empowered to sufficiently engage participatory processes, particularly in the face of extreme inequities of knowledge and experience between themselves and other more organized and powerful stakeholders.
- How should participation be incorporated into governance? If participation has no influence on governance and policy then it will be perceived as tokenism – stakeholders will perceive no benefit to taking part, and participation then becomes unsustainable.
- People's lives, and their perceptions of resource management issues, are integrated. Legislation fragments these issues, as do the boundaries between and within the different government departments.
- People's motives for participating often relate to 'water services' and not 'water resources'. Managers will need to find ways to integrate and link issues (like domestic water supply and water resources) so that stakeholders can participate meaningfully in the activities of CMAs.
- Integration of activities at the very local scale is not national government's responsibility but that of the local community themselves.
- People's common interest in the management of a shared resource is centred around a shared place, which usually does not correspond to ecologically determined resource units.
- Representatives struggle, and usually fail, to give feedback to their constituents. Sometimes this is because they don't understand the message they need to communicate well enough themselves.
- Dealing with issues raised that are peripheral to the specific participatory process is problematic. For example, it wasn't possible to deal with issues like allocations,

raised within the Inkomati CMA process, because the relevant staff members were not available.

5.7.1 Conclusion: Perspectives of government

The perspectives expressed by DWAF officials illustrated a number of fears and concerns, priorities, and unclarified issues and questions.

Fears and concerns about participatory processes include:

- Threats to the 'public interest' or 'common good' through stakeholder influence on decisions.
- Powerful stakeholders will override the interests of others, especially the previously disadvantaged.
- Involving stakeholders will delay decision-making and implementation.
- A lack of accountability and capacity of representatives threatens the legitimacy and efficiency of participatory processes.

Priorities perceived within the role of government are:

- To act as 'referee' and protect the interests of the powerless.
- To urgently address the most serious cases of inequity and unsustainable use.
- To build capacity for participation.

Issues requiring clarification include:

- The future role of government in a participatory WRM system.
- The role of stakeholders in decision-making processes.
- The role of participation in governance.
- The integration of water resources with water services and other issues.
- How to achieve cooperation with other government departments and their legislation.
- How to deal with issues raised that are peripheral to the WRM process.
- How to coordinate participation across different spatial scales.

These concerns, priorities and issues will affect the choice of participatory processes by government and also the success of their implementation. Though the issues listed do demonstrate some awareness of the tensions inherent to participatory processes, the large number of central issues that government officials perceive as requiring clarification is cause for concern. Lack of clarity on the purpose and goals of participation is likely to play out as confused, inconsistent and ultimately ineffective processes.

Implications of government perspectives for the design of participatory processes will be discussed relative to that of other role-players in the conclusion to this chapter (Section 5.9).

5.8 Perspectives of practitioners/specialists

Interactions with practitioners and specialists (including interviews and meetings, and particularly the meeting held to discuss decision-making tools for determining the Reserve) delivered the following range of perspectives on participation and its role:

Role of government in facilitating participatory processes:

- DWAF is not playing a referee role. Instead, DWAF sees participation as letting stakeholders 'do their own thing'.
- Why are they calling non-negotiables 'participatory' issues? Officials running participatory processes should stop creating the impression that everything is negotiable. The Reserve is not negotiable. Tell the farmers that water must be paid for; the Reserve must be met.
- What's with this open agenda idea? What's wrong with having an agenda?
- I don't think you can allow people being upset about issues that aren't relevant to take over the process, but they have to be heard.
- Proponents of bottom-up management systems imply that people want *less* government, and to do things for themselves. But if you listen to people, particularly impoverished rural people, they actually want *more* government, they are always asking for government to intervene in everything.
- People don't want more government, but they do want more help.

Role of specialists and technical knowledge:

- Ecologists must realise that they serve a function in the process, to supply useful information toward a broader aim. They provide a service. They don't 'call the shots'.
- Stakeholders need technical information, and the manner in which this is transferred is very important.
- The best thing DWAF can do is to give people knowledge to manage. Currently local people want to manage their resources but they don't know how.

Representation:

- One cannot expect one person to represent the views of an entire community [referring to a decision-making process involving 20 representatives for an entire WMA].
- How does one ensure accountability of representatives? People are only interested in petrol money and lunch. They do not have time or the incentive to take the message back.
- Information and capacity only goes to the group you involve. People don't run off and tell 40000 people. It is unrealistic to expect them to.
- Sustainable participation can only happen if one keeps the costs down. For example, Water User Associations are not the answer for getting local people involved, because it costs too much to belong to them.

Consensus and conflict:

- Consensus is idealistic.
- There is lots of conflict in our process. Conflict is what makes the process move.

Designing processes:

- One needs to be very clear about defining participatory processes, including outcomes and how the process will be evaluated.
- Context and history affect participatory processes. Blueprints are not possible. One needs to understand the context and history of a setting to understand drivers, and the consequences of changing these [for example through removal and reallocation of water rights].

A number of perspectives expressed related directly to the process of determining the Reserve, the most technically demanding aspect of NWA implementation, and thus requiring substantial involvement of technical specialists. These are presented in a separate section, below.

5.8.1 Determining the Reserve

Multiple objectives/nature of decisions:

- Multi-criteria decision-making tools are needed because different sectors of society have different objectives – valuing social, economic or ecological goals.
- Resource management decisions are multi-criteria, because all humans, and therefore sectors, have multiple goals – social, economic and ecological.

Decision-making process:

- A decision-making process should first find out what different stakeholders preferences are and then use a computational (Multi-Criteria Decision Making) tool to integrate these.
- Sectors can be consulted separately by specialists to ascertain their preferences.
- Specialists can use their expertise to develop a variety of scenarios for compatible and achievable combinations of Management Classes and then stakeholders can be involved in a Multi-Criteria Decision Making process to evaluate these scenarios and ultimately choose an optimal one.
- Specialists can design an optimal combination of Management Classes to best meet society's needs.
- Ecologists should start the bidding with their desired Ecological Management Classes. Then stakeholders can negotiate these down for social and economic reasons.
- Stakeholders should develop Ecological Management Classes alongside ecologists.
- Those managing participatory processes first need to generate trust amongst stakeholders of the tools, processes and consultants that will be used. Then specialists can make recommendations and provide information that will be accepted by stakeholders.
- Making a wise and durable decision requires explicit consideration of trade-offs.

Timing and extent of stakeholder involvement in Reserve determination:

- Stakeholders should only become involved in the Reserve determination process after ecologists have described the Present Ecological State.
- Stakeholders should be involved from the start; the kinds of things they want from the river should inform the criteria which ecologists use to describe the Present Ecological State.

5.8.2 Conclusion: Practitioner perspectives

Practitioners have diverse and even opposing views on the intentions, principles and processes of stakeholder participation in WRM. The role of specialists in participatory decision-making processes is perceived as either providing a service to a stakeholder-driven process, or playing a more central role by making expert decisions, which nevertheless take into consideration stakeholder inputs and objections.

There is a lack of agreement as to whether decisions must be a compromise between social, ecological and economic stakeholders or between social, ecological and economic goals. Those who perceive a subordinate role for stakeholders' inputs to the decision-making process tend to see WRM decisions are 'technical' rather than 'social'.

The role of government in managing participation is perceived by some as referee, in which processes must be tightly controlled to balance power, and to frame decisions by clearly setting the limits of what is negotiable. Others suggest that government should facilitate stakeholder initiatives, and provide support (help), but not control them.

Concerns about representation echo those of stakeholders and government. The issue of representation provides serious challenges to achieving effective participation. Problems include the large spatial scale of participatory processes, a lack of capacity and resources to provide feedback, and a lack of incentives for ensuring effective and accountable representation.

The implications of practitioner perspectives, along with those of other role-players, will be discussed in the next section, the conclusion to this chapter.

5.9 Conclusion: Role-player perspectives of a future participatory WRM system and the implications for the design and implementation of participatory processes

Interactions with the different role-players of a participatory WRM system indicate that government, specialists and stakeholders are operating from very **different frames of**

reference. These affect their perspectives and expectations of the scope and context of WRM, and with this their views on who is competent to make WRM decisions.

Government interprets this scope using the law – the NWA and related legislation. Practitioners and specialists interpret this scope from the perspective of sustainability, equity or efficiency, depending on their discipline and their role within the WRM process. For stakeholders, the scope and context of WRM is very broad, and often emotive. Many **expectations** arise from use of the term 'water' and there is little or no attempt by stakeholders to separate issues of domestic water from water for irrigation or issues about protecting resources or ecosystems. This is contrary to legislation and the manner in which government departments are allocated functions.

The workshops held with stakeholders from the Inkomati WMA suggested some principles to help deal with the challenges of integration which these differing frames of reference present:

- The value of an **exploratory** phase and of **flexible agendas**, especially at the start of a process, to expose people to each other's perspectives, and thereby to build a **shared understanding of context**.
- The value of **vision**, and of **looking to the future**, in enabling people to find common ground.
- The value of **ecosystem 'goods and services'** as a common currency when discussing the different values people have for water resources.
- The need for **'mutual learning'** by all role-players.
- The need for a **holistic, integrated approach** to WRM.

Though the broad context of WRM from stakeholders' perspectives is a challenge, particularly with regard to managing their expectations for the jurisdiction of specific participatory processes, this also presents an opportunity. People are eager to participate in WRM processes, because they recognise the importance of 'water' to their lives. This **energy and enthusiasm** can be harnessed to inspire stakeholder action in improving both access to, and the status of, their water (and land) resources. Inspiring such action is a potential benefit of conducting successful participatory processes.

However, this study also demonstrated that perspectives differ, especially among government and the practitioner community, on how participation should be conducted, stakeholders' role and capacity, the nature of WRM decisions, and the key challenges facing these. The range of variation that exists implies that there is **no common vision for the purpose of participation in the new water policy**.

In the light of this lack of common purpose, the case studies presented in the following chapters (Chapters 6 and 7) illustrate two quite different approaches to implementing the NWA's (non-prescriptive) requirement for 'public participation' in WRM.

CHAPTER 6:

STAKEHOLDER PARTICIPATION IN THE DEVELOPMENT OF A PROPOSAL FOR THE ESTABLISHMENT OF THE INKOMATI CMA

6.1 Introduction

The Inkomati was one of the catchments prioritised by DWAF for the early establishment of a CMA. The Inkomati's status as an international catchment, and the conservation importance of the Kruger National Park, provided the primary motivations for this decision (Woodhouse and Hassan, 1999). A participatory process toward the establishment of an Inkomati CMA was begun in July 1997, and ended with the submission of a proposal to the Minister of Water Affairs in late 2000. The Inkomati CMA was eventually established by the Minister on 30 March 2004, the first WMA in South Africa to attain this goal.

The following discussion is based on records, minutes or reports of this process, personal observations from attendance of meetings held within the participatory process over the course of 2000, interviews with various role-players, and finally the contributions within workshops of a variety of stakeholders who have participated in the consultation process.

The purpose of this account is not an in-depth evaluation of a particular participatory process – the intention of this research was not to score the success of the Inkomati CMA process, but to find lessons of experience applicable to the broader process of participatory Water Resource Management in South Africa.

This chapter is structured to reflect the approach taken to assess/evaluate participatory approaches within the context of this research. As explained in Chapter 2 (Section 2.11 and 2.12) it was decided that evaluation of participatory processes should be by their outcomes. This is intended to prevent this evaluation from being biased by preconceptions about a preferred process. Evaluation of outcomes can only occur relative to the intended outcomes of the process. A set of desired outcomes were derived in Table 2.1 and listed in Section 2.11.

In this chapter, the description of the case (the history and process elements used), the evaluation of outcomes, and the likely reasons for these outcomes (procedural influences) will

be presented separately. The report on the case will first provide a description of context, followed by a description of the process followed. This will be followed by an evaluation of outcomes, using the framework in Section 2.11, and based on personal observation, the documentation resulting from the process, and stakeholder perceptions expressed in interviews and workshops. Finally, the likely influence of key procedural elements (many of these already noted, but not evaluated, in the description of the case) on determining these outcomes will be discussed.

6.2 The Inkomati WMA

The following account is intended to provide an understanding of the context of the Inkomati WMA at the time of the CMA proposal process. Aspects of context such as the status of water resources, the demands being made on them, and the history of cooperation or conflict in relation to resource use, potentially provide challenges to the success of participatory processes, and determine the issues stakeholders bring to the process.

6.2.1 Location

The Inkomati WMA (Figure 6.1) consists of that portion of the Inkomati River basin which falls within the boundaries of South Africa (an area of 28 080 km^2, with a natural mean annual runoff of 3432 million m^3 (DWAF, 2000b). The Inkomati WMA covers most of the Mpumalanga Province, and includes a southern portion of the Limpopo Province, as well as areas of the former homelands of Kangwane, Lebowa and Gazankulu. It is made of up the 3 major catchments of the Komati, Crocodile and Sabie-Sand (as well as 2 minor catchments falling entirely within the Kruger National Park, and therefore not considered for management purposes as distinct subcatchments of the Inkomati WMA). The Sand River, though a tributary of the Sabie, has, as a consequence of its position within the former homelands of Lebowa and Gazankulu, a very different pattern of resource development, and is considered to be a distinct fourth element of the WMA (DWAF, 2000b). These 5 rivers arising within South Africa all flow into the Incomati River in Mozambique. The Komati River also traverses Swaziland, and management of the Inkomati is subject to international agreement (about minimal flows) between South Africa, Swaziland and Mozambique (DWAF, 2000b).

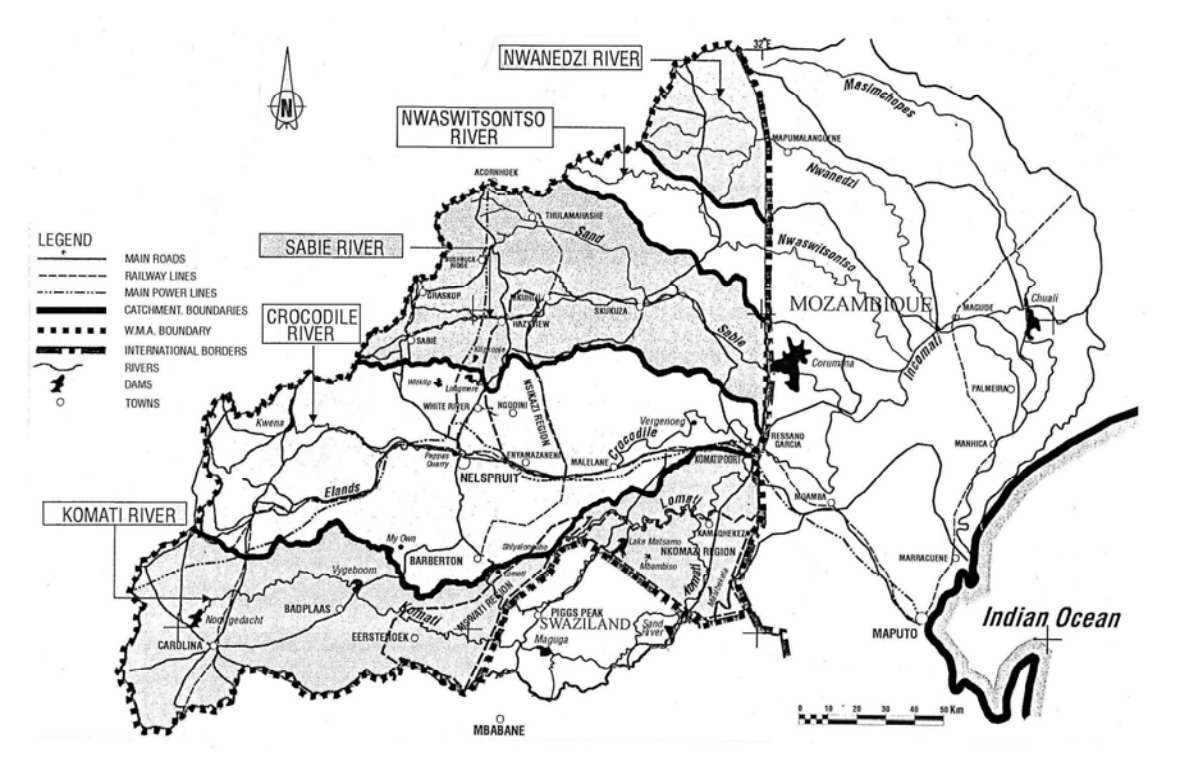

Figure 6.1: The Inkomati Water Management Area (From DWAF, 2000b)

6.2.2 Status and use of water resources

Though the water quality and ecological health of the rivers in the basin is considered to be very good relative to many other areas of South Africa (the Sabie in particular is estimated to be one of the most biologically diverse river systems in the country), abstraction and afforestation have caused a marked long-term reduction in flow. This is particularly severe for the Sand, which now frequently stops flowing during low flow periods (Weeks *et al.*, 1996). Due to the present extent of consumptive use, the Crocodile River has been declared a 'stressed' resource and this has resulted in a moratorium on the issuing of new permits for water use prior to the determination of the Ecological Reserve (Ligthelm, pers. comm.).

The principal water users within the WMA are forestry and irrigated agriculture. Between them these sectors account for 75 percent of all water use, which is equivalent to 42 percent of mean annual runoff (Woodhouse and Hassan, 1999). Commercial agriculture and forestry thus have a large stake in the outcomes of decisions about a future CMA – in particular the future running cost of the organisation, the resultant plan to recover costs from resource users, and how their interests would be represented on decision-making boards and committees.

Industrial water users include sugar mills, a paper mill and power stations. Domestic consumption, at only 5 % of total water use in 2000, presently places a relatively minor demand on the Inkomati's water resources, but this is expected to triple by 2010. In 2000, it was estimated that more than 50 % of the population of 1.85 million have poor access to drinking water and sanitation facilities (DWAF, 2000b). Understandably, the hope of improved access to water for domestic use provides a strong motivation for participation in any forum placing the issue of 'water' on its agenda. Other major stakeholders within the basin, who are not however stakeholders by virtue of their abstractive use of rivers, are the tourism and conservation sector, most notably the Kruger National Park, which is in a vulnerable downstream position in both the Sabie and Crocodile catchments.

The majority of irrigation agriculture, and therefore the majority of water use within the basin, is carried out by white farmers. In the Lower Komati, the Nkomazi Irrigation Expansion Programme effected the development of 5300 ha for black small cane growers from 1994 to 1999 (Woodhouse and Hassan, 1999) with further expansion planned. At the time of the CMA proposal process two major dams were under construction in the Inkomati basin, the Maguga dam on the Komati, and the Injaka dam on the Marite River in the Sabie subcatchment. These will predominantly benefit emerging farmers and domestic water users from previously disadvantaged communities (DWAF, 2000b).

6.2.3 History of cooperation and conflict

Conflicts in the past over water resource use have mainly involved the three major stakeholder groupings – forestry, irrigation agriculture, and conservation, with conservation generally being located downstream of agriculture, and forestry occurring in the upper catchments of all three rivers.

A severe drought in 1992 intensified conflicts between Forestry and downstream users, and raised questions about the extent of streamflow reduction caused by afforestation of the upper catchments (Lubbe, pers. comm.). The 1992 drought also saw the formation of the Sabie River Working Group (SRWG), a multi-sectoral forum concerned with coordinating voluntary actions by its members in all aspects of managing the river. The SRWG was formed by staff of the Kruger National Park (Woodhouse and Hassan, 1999) with the primary purpose of maintaining minimum flows in the Sabie River by managing members' abstractions from the river. The group has shown considerable success in building good relationships between sectors and individuals, and achieving and implementing successful cooperative agreements. In particular, it seems that the SRWG has been instrumental in bridging the rift between Forestry and downstream users in the Sabie catchment. In the past the group has been well connected to DWAF, at both the regional and national level, and involved influential role players in prominent user sectors in the catchment. However, the forum has also struggled with perceptions of it being non-representative, as it has largely not succeeded in including previously disadvantaged members, or engaging members of the Sand subcatchment in its

activities. Its strongest participants appear to have been Forestry, irrigation agriculture, Kruger National Park and DWAF (Sherwill *et al.*, in prep.).

There is some evidence of other forums in the Inkomati (Steyn, pers. comm.), but no recorded information was available on these, and they do not seem to have had the profile, range and success of the SRWG.

6.2.4 Current issues

The workshops held with Inkomati stakeholders, all of whom were participants in the Inkomati CMA proposal process, identified the following issues and problems experienced by stakeholders around the broader context of water resource management in the Inkomati WMA in 2000 (reported in full in Chapter 5). Some of these concerns resulted from the limitations of past political and management systems, while others have arisen with the transition to a new system.

These issues were as follows:

- Concerns about the deterioration of water resources, in both quantity and quality.
- Difficulties experienced by previously disadvantaged stakeholders in obtaining a new allocation (licence to use water).
- Concern for protection of stakeholders' investments in private infrastructure, linked to historic water rights now felt to be under threat.
- Lack of clarity among all stakeholders about new policy and its implications.
- Lack of clarity about the water resource and resource availability, and the need to quantify the Reserve as soon as possible to help to clarify future availability.
- Lack of technical capacity among previously disadvantaged stakeholders.

Access to water for emerging farmers is a key issue that was emphasised by stakeholders in our workshops and also within the Inkomati CMA proposal process, and will therefore be addressed in further detail in the next section.

6.2.5 Access to water for emerging farmers

Many of the stakeholders listed as part of the IRG identified themselves as emerging farmers (often in combination with other sectors such as Traditional Authorities or Civil Society). Their quest to secure allocations formed a major part of the proposal process, and their situation requires some explanation.

At the time of proposal development emerging farmers faced a number of obstacles in securing access to water. These were as follows:

Confusion over who the allocating authority is in former homeland areas:

- Prior to 1994, water resource allocation within homeland areas was delegated, through a block allocation by DWAF, to the homeland administrations' departments of agriculture. After 1994, the provincial Agriculture departments took over this responsibility, even though under the NWA all permits for water abstraction are required to be issued by DWAF. Thus, black farmers who approach their local irrigation board for water are referred to DWAF, who respond by saying that all the water is allocated (Woodhouse and Hassan, 1999). By this DWAF are referring to the block allocation, to which access can only be gained through the Department of Agriculture. The Department of Agriculture effectively allocates water through the approval of irrigation projects, and these then receive a DWAF permit. As pointed out by Woodhouse and Hassan (1999 p. 27) however, "this procedure is seldom clear to applicants… (and) ... even if it were, it is unlikely to prove helpful as the Department of Agriculture is unsure how much water the homeland administrations were allocated and, therefore, how many projects can be supplied with water." The participants in our workshop clearly experienced this as a frustrating and confusing process of being shunted between DWAF and the provincial agriculture department.

Confusion over the extent to which known allocations are being used:

- There is widespread uncertainty over water availability, in part due to a "lack of systematic and accurate records of water use by irrigated agriculture" (Woodhouse and Hassan, 1999 p. 4). In the face of this uncertainty it is safer for DWAF and/or the Department of Agriculture to assume that all water has been allocated, and to refuse new applicants on this basis. In many instances this is a realistic assumption. For example, there is evidence to suggest that white farmers in certain areas may have been permitted by their Irrigation Board to use part of the 'homeland' allocation (Woodhouse and Hassan, 1999). It is also possible that in the absence of certainty, these farmers, despite having potentially illegally exceeded their allocation, are now protected by the status of "existing lawful use" under the new water legislation.

Loss of historic water rights of land awarded through 'land claims':

- The past however provides little such refuge for emerging farmers. Though previous water scheduling statuses of land restored via successful land claims should also suffice as an existing allocation, if this was not used during the required October '96 to September '98 period this qualification is not automatic. Emerging farmers also have little capacity to pursue this option.

Woodhouse and Hassan (1999), in their analysis of the Inkomati consultation process up until April 1999, predicted that, given these realities, and the considerable frustrations and potential political might of emerging farmers, DWAF would not be able to complete the participatory process of CMA establishment without addressing the issue of new allocations. They were, however, to be proven wrong. Given that the extent of these realities was most likely never made entirely clear to these stakeholders, this may offer one explanation. However, given the

strength of feeling on the issue of allocations, this outcome also questions the influence that this sector was ultimately able to exert within the participatory process.

6.3 Public participation in the development of a proposal for CMA establishment

In July 1997, a consultation process towards CMA establishment was initiated within the Inkomati Basin. This process was managed by Dr Magda Ligthelm, Deputy Director: Water Quality in the Mpumalanga Regional Office of DWAF, together with various appointed consultants. At this time the Act had not yet been written, though the White Paper on a national water policy had recently been published.

6.3.1 Overview of process

Initially, the three subcatchments of the Inkomati were consulted separately, with meetings beginning in July 1997 in the Komati, January 1998 in the Crocodile, and as late as February 1999 in the Sabie, and April 1999 in the Sand. The purpose of these early meetings was to "inform water users about the new water legislation, to create opportunities for discussion of issues of concern, and to prepare water users for the challenge of developing a CMA proposal" (DWAF, 2000b p. 302). It appears that initial attendance at these 'Catchment Forum' meetings was through newspaper advertisements and the invitation by DWAF of known stakeholders. The meetings were then used to identify further candidates for inclusion. The primary aim of this first phase of consultation was stated by DWAF as the improvement of stakeholder representation within the process (DWAF, 2000c). The Catchment Forums were ultimately used to establish Steering Committees, comprising a smaller number of people representing the major water user and interest groups (DWAF, 2000b).

The initiation of consultation prior to a government decision on the demarcation of WMAs, allowed the separate forums of the 3 subcatchments to entertain the possibility of separate Komati, Crocodile and Sabie-Sand CMAs. By mid-1998 it was however clear that the Inkomati was to be declared a single WMA, which raised considerable concern and opposition amongst stakeholders of particularly the smaller catchments, that their concerns would be diluted or overruled by management at this larger scale (Woodhouse and Hassan, 1999). This concern was addressed in part by the design of the institutional structure of the CMA to allow for maximum autonomy at the subcatchment level, but from interactions with stakeholders in 2002 it seems that concern over this issue still persisted amongst a variety of stakeholders, two years after the end of the proposal process.

The second phase of consultation was focused on the development of a proposal for the establishment of a CMA. Joint meetings were begun in May 1999 with the Crocodile and Komati Steering Committees, expanding to include the Sabie-Sand in October 1999. At this meeting the consultant team (consisting of members of an engineering consultancy, an

environmental consultancy and an NGO) was requested to develop the first draft of a proposal for CMA establishment. Separate meetings of the subcatchment Steering Committees however still continued, in order to determine the sectoral and regional composition of their 'Catchment Management Committees' (CMCs), and to nominate names for these positions to be included in the final proposal.

The first draft of the proposal was released for comment in December 1999. A second draft was prepared based on these comments, "primarily for input by DWAF management" (DWAF, 2000b p. i). This draft was not released for comment, but lists of stakeholder comments received, as well as the changes made in response to these, or alternatively the reasons why changes could not be made, were distributed. Several meetings of the joint Inkomati Steering Committee (more commonly referred to as the Inkomati Reference Group (IRG)) were held to discuss the contents of the proposal, culminating in a final draft distributed in June 2000.

On 8 August 2000 a meeting was held with the intention of gaining agreement on the contents of the final proposal, which could then be submitted for ministerial approval. This agreement was withheld by several participants, chiefly those representing the interests of white irrigation farmers, whose main grievance was the proposed pricing strategy for water use charges (pers. obs., 8 August 2000). This was a concern that had been discussed in several meetings since the distribution of the first draft, and which the farmers had suggested should be addressed by alterations to the personnel structure or functions of the CMA, or through a larger financial contribution by government. It was agreed at the August 8 meeting that the consultants would have to meet separately with those concerned before the final proposal could be submitted.

At a meeting held on 15 September 2000 the Inkomati Reference Group finally approved the submission of a substantially altered proposal, containing a number of alternatives for the various aspects where agreement could not be reached, and from which the nominations for CMCs had been removed. Final approval of this document was almost withheld due to the objections of emerging farmers, who asked to interrupt the meeting in order to hold a brief discussion among their members outside (pers. obs. 15 September 2000). This discussion resulted in the presentation of six conditions to their approval of the proposal, first and most important of which was 'water rights for emerging farmers before the establishment of the CMA', followed by various suggestions for addressing this issue. Arguments by members of various other sectors, that the urgent establishment of a CMA would do more to address emerging farmers' concerns than the interventions suggested, finally convinced this group to withdraw their conditions.

In total 26, 18, and 12 meetings were held in the Komati, Crocodile and Sabie-Sand catchments respectively. Two joint Komati-Crocodile meetings and 8 meetings for the entire Inkomati WMA were held. By the end of the last meeting 160 names had been added to the Inkomati Reference Group list (DWAF, 2000c).

6.3.2 Representation

An analysis by DWAF revealed that the final list of members of the Inkomati Reference Group consisted of 46.8% black males, 41.8% white males, 7.6% white females, and 3.8 % black females (DWAF, 2000c). DWAF has recognised in its summary report that the lack of participation of women in water management will need special attention in the future.

Information on attendance at all meetings held indicates a progressive enlargement of consultation, and the achievement of a broader representation of interests over the course of the first year (Woodhouse and Hassan, 1999). Black farmers were entirely absent from the early meetings in the Crocodile and Komati catchments, and by the middle of 1998 this was an important subject of discussion in the steering committees. Some felt that the 'grassroots' were adequately represented in the process by Transitional Local Councils (TLCs), or that the absence of emerging farmers was justified by the fact that "there weren't any in a particular area", or that they were "difficult to identify and contact" (Woodhouse and Hassan, 1999 p. 36). However concerns about this under- or non-representation resulted in special efforts by DWAF to identify black farmers' organisations and invite them to briefing meetings, in which representatives to take part in the broader process could be identified. It is likely that these efforts were the main reason for the eventual inclusion of emerging farmers and local government in the consultation process.

Though steering committees were intended as nominated and therefore fairly exclusive subsets of the larger catchment forums, this character does not appear to have been maintained as consultation progressed. Attendance registers suggest that there has been a continual addition of interested parties, and also discontinuous representation of various interests and groups throughout the process, presumably through replacement of representatives by their organisations over time.

The most consistent and committed representation at meetings (i.e. commercial and emerging agriculture) reflected the major issues at stake in the consultation process. White commercial farmers, whose water use charges presented the proposed major source of revenue for the funding of the future CMA, had a considerable financial interest in the proceedings. Black emerging farmers, and communities without domestic water supply, most likely saw the consultation process as a means to achieve the access denied elsewhere.

6.3.3 Choice of meeting venues and times

The meetings for the subcatchments took place at venues central to these areas, including separate meetings that were held for the Sand catchment at various times. The greater Inkomati meetings were always held in Nelspruit. Meetings generally took place on weekday mornings or afternoons, and lasted for several hours, and thus required considerable investment of time and effort by representatives, particularly those who had to take time off

from employment unrelated to their participation in the process. Transport costs could be claimed back from DWAF at the end of each meeting by those participants representing emerging farmers or civil society (DWAF, 2000c). This was one of the main interventions made by government to encourage and subsidise the participation of previously disadvantaged stakeholders.

6.3.4 Written communication and feedback to representatives

Invitations to the next meeting, along with the minutes of the previous meeting, were sent by post to all the names appearing on the IRG list, which was updated from an attendance register circulated at each meeting. All written communication that took place within the proposal process was in English, with the exception of the Executive Summary of the penultimate draft of the proposal (entitled the 'final' proposal) which was published in siSwati, seSotho and Tsonga, and copies of which were placed in public places such as libraries and municipal offices for public access and comment.

6.3.5 Major decisions to be made, providing the agenda for discussion

Dr Ligthelm clarified the focus of the CMA consultation process as, firstly, ensuring that all stakeholders were identified and involved in the process, and secondly, developing a proposal for CMA establishment, according to the requirements of the Act. It was emphasised that "the purpose of the consultation exercise is not to provide immediate answers to water problems but that relevant DWAF departments at regional and national level have been called upon to provide information and advice where appropriate" (Woodhouse and Hassan, 1999 p. 37).

Under the NWA (section 77): "A proposal to establish a catchment management agency must contain at least:

- a proposed name and a description of the proposed water management area of the agency;
- a description of the significant water resources in the proposed water management area, and information about the existing protection, use, development, conservation, management and control of those resources;
- the proposed functions of the catchment management agency, including functions to be assigned and delegated to it;
- how the proposed catchment management agency will be funded;
- the feasibility of the proposed catchment management agency in respect of technical, financial and administrative matters; and
- an indication whether there has been consultation in developing the proposal and the results of the consultation."

This section of the Act was therefore largely responsible for providing the focus for the second phase of the consultation process, and thus for assigning relevance to various issues.

Major decisions which were tabled for discussion were linked to the Act's requirement for a description of the financial management of the future CMA, which included a source of revenue in the form of a pricing strategy for different types of resource use, and a comprehensive organisational model for the CMA, to determine its cost and thereby its financial viability.

A focus of several of the steering committee meetings for individual subcatchments was the determination of the sectoral and regional composition of the Catchment Management Committees (groups of 15 – 25 representatives who will make decisions on behalf of their subcatchment within the Inkomati CMA), and the nomination of representatives for these positions. This process proceeded by discussion and consensus agreement. (Consensus was explained to be a requirement of this decision (pers. obs. 9 February 2000)).

However, several issues were also raised by participants that were not directly applicable to the preparation of the proposal in terms of the requirements of the Act – predictably, domestic water supply and allocations for emerging farmers. Domestic water supply is covered by legislation (the Water Services Act) separate from that for Water Resource management (NWA), and is not the responsibility of CMAs or Water Boards, but of Local Government – at the time the Transitional Local Councils. These issues were referred to other forums or departments, and at one stage these departments were brought along to meetings to attempt to address these concerns.

Understandably the question of water allocation for emerging farmers was raised repeatedly throughout the process. In response to this a series of meetings was convened in March 1999 to discuss the issue of water availability, particularly in the Komati, and which produced a "series of recommendations which constructively and imaginatively address some of the uncertainties about water availability" (Woodhouse and Hassan, 1999 p. 37). It is not certain what practical actions arose from this, but concern over allocations had certainly not diminished in 2000 (based on that expressed in meetings attended during this year). Raising of this issue in meetings in 2000 generally elicited responses, from DWAF and the consultant team, such as "this is not the right forum for this issue" (pers. obs., 15 September 2000), "wait for the CMA" or "wait for Injaka Dam".

6.3.6 Facilitation approach

Meetings were generally facilitated by a member of an NGO working on the project team, and often involved lengthy 'Powerpoint' or overhead transparency presentations by a DWAF official or the consultant engineer who had been contracted to write the bulk of the proposal. Comments were usually invited in response to presentations and written documents. Participants were seated facing forward, and facing the facilitator or presenter. Ground rules for participants included a requirement that participants respect each other's right to speak without interruption, that they should listen to what others are saying, and an appeal that

speakers should keep comments to the point, come up with a clear proposal, be objective, and seek consensus agreement. Consensual decision-making was emphasised as being a requirement of the NWA, and it was stated that no voting would be allowed (pers. obs., 8 August 2000). 'Consensus' was however determined indirectly – as an absence or eventual withdrawal of opposition to a suggested decision.

6.4 Evaluation of outcomes of the participatory decision-making process

As explained earlier, the approach taken to evaluate case study participatory processes was to examine processes by their outcomes, and then to use this assessment to link these outcomes back to the procedural variables likely to have contributed to them. These outcomes will be discussed, using the framework described in Section 2.11: firstly, the level of participation achieved as well as intended; secondly, an assessment of outcomes of the process, both product (e.g. quality of decision reached) and process outcomes (e.g. less tangible outcomes such as a sense of ownership, inter-sectoral relationships, improved knowledge and capacity). Finally, the key procedural elements that appear to have contributed to the outcomes observed will be discussed (Section 6.5).

6.4.1 Level of participation: Power-sharing between government and stakeholders

Evidence for the degree of power-sharing which government intended and permitted in the Inkomati consultation process is somewhat ambiguous.

The decisions and CMA proposal contents which drove the participatory process and the agenda thereof, such as the institutional structure, the pricing strategy, and the CMCs, were presented to stakeholders as negotiable. They were certainly given a lot of freedom to design CMCs and to nominate members. Allowing for the structural representation of CMCs to differ between subcatchments was an agreed principle from the start of the proposal process (minutes, 8 August 2000). One interviewee suggested that this was too much freedom, with the result that the different subcatchments produced very different models for representation on the CMCs, with the Crocodile potentially favouring geographic over sectoral representation as a means to increase the relative representation of commercial agriculture and therefore essentially white farmers.

In contrast to this flexibility on CMC composition, the initial unwillingness of the consultants and DWAF to make substantial changes to the draft proposal suggested that several of the proposal's required contents were actually non-negotiable. As commercial farmers' objections to the proposed pricing strategy grew more aggressive with time, Dr Ligthelm (the DWAF official managing the process) responded by pointing out that in the absence of a CMA, DWAF's recently developed generic pricing strategy, which was similar to that proposed by the consultants, would come into effect anyway (pers. obs., 3 May 2000). However, in the

face of losing the irrigation farmers' support for submission of the proposal, the pricing strategy was finally substantially revised. It was agreed at the final meeting on 15 September to submit the pricing proposal as a set of scenarios based on assumptions about the extent of registration and revenue recovery – the 'worst' of these still representing a 32% reduction in the original proposal of R58/ha/year charge for irrigation use. This concession suggests that without the necessary evidence of broad stakeholder support and a satisfactory consultation process, the proposal for CMA establishment would have failed to meet ministerial approval. It thus seems that the public's role is taken seriously at the central government level, and that decisions will not be ratified if there is not public approval, or at least the absence of strong public opposition.

The influence of the consultants is clearly evident in the final CMA proposal, whereas the influence of stakeholders is not. The document largely resembles something the consultants could have produced in isolation from the participation process, with key alterations where this proved unacceptable to certain influential sectors. The bulk of the proposal is a technical discourse easily identified as having been chiefly authored by an engineer. This is reflected in the main headings forming the Table of Contents of the proposal, for example: water use, storage dams, system yield, water resource development possibilities, existing and future water use requirements, and existing management measures. Contents related to the resource focused on water, whereas contents related to the future institution focused on staffing and cost requirements, and revenue generation. Some mention was made of 'historical and natural environmental aspects' of the catchments, which included 'conservation status', and threatened flora and fauna. One section for each of the subcatchments was devoted to a discussion of 'issues' under the heading of 'other considerations', which included water quality, neighbouring states, and sedimentation. None of these appeared to be issues raised by stakeholders.

One interviewee commented that consultants are inappropriate managers and facilitators of local WRM processes, as they have only a short-term interest in the process (i.e. the duration of their contract) and have little contextual knowledge, if they are not local.

6.4.2 Product: a proposal for the establishment of the Inkomati CMA

The product of the Inkomati CMA proposal process was the CMA 'proposal' i.e. a document containing a set of decisions (about the structure and financing of the new institution, the composition of CMCs). Three potential criteria for evaluating decision outcomes are wisdom (the competence of a decision, reached through adequate consideration of all available relevant information, views, values and needs), fairness (all interests are treated equally) and stability (decision is accepted by all parties and will therefore not be opposed) (Susskind and Cruikshank, 1987).

Wise?

Improved access to local knowledge and the potential for the identification of local capacity potentially resulting from a public participation process is not strongly reflected in the contents of the final CMA proposal. The participatory process should have provided access to the views, experiences and knowledge of a range of stakeholders, thereby producing a well-informed proposal and also increasing the information base on which future decisions could be based, but these are not reflected in the contents of the proposal.

As mentioned in the previous section, the proposal content was highly technical. Given the technical nature of many aspects of water resource management it may be argued that this represents the most competent proposal. However, considering the technical and supply-oriented emphasis of particularly the previous government's approach to water resource management, the document certainly does not reflect the change in paradigm at central policy level, particularly in its neglect of an ecosystem perspective on the 'resource'.

Fair?

The final meeting of the Inkomati Steering Committee provides an indication of the fairness of the outcome of the three-year consultation process. White irrigation farmers and others having 'existing lawful use' achieved a substantial reduction in the proposed charge for irrigation water use, relative to the starting proposal, and also to DWAF's recently published default national water pricing strategy. By contrast, emerging farmers and previously disadvantaged communities with no domestic water supply achieved no address for these concerns, and possibly a greater degree of confusion over the means and likelihood of resolution of these issues in the future (though DWAF officials expressed regret at the failure to find address for these issues through referral to other forums (Lighelm, pers. comm.)). The chief concerns of these two stakeholder groupings are not directly related, or were not portrayed to be as such in the consultation process, and the outcome of the process therefore does not represent a clear trade-off or compromise in which the aspirations of one group were favoured at the expense of the other. Nevertheless, the effort and expense of participation was rewarded to some extent for one group but achieved little progress for another.

As explained earlier, a focus of several of the steering committee meetings for individual subcatchments was the determination of the sectoral and regional composition of, and nomination of individuals for, the Catchment Management Committees (CMCs). For the nominated CMCs, previously disadvantaged representation on the Komati and Sabie-Sand approached or exceeded 50 %. However, for the Crocodile the list of individuals produced was skewed heavily toward white males (14 out of 17 members (DWAF, 2000b)), where it was decided that positions on the CMC were to be based more on regional than sectoral representation. Few women were nominated for any of the CMCs. The composition of the CMCs and names of its members were removed from the final proposal at the request of certain members of the Inkomati Steering Committee (pers. obs., 15 September 2000), and due

to concern about the 'undemocratic' nature of their appointment (i.e. they were not elected by a vote).

Stable?

Many of the issues decided upon in the proposal process were merely for the sake of a 'viable' proposal and will need to be discussed again in order to set up the CMA, possibly by fatigued or disillusioned stakeholders. For example, time spent on issues like CMC nomination will effectively be perceived as having been wasted, as the nomination process will need to be redone, and will most likely be accompanied by complaints of those who feel it has already been completed.

6.4.3 A sense of ownership of the process and product of participation

Perceptions of ownership of the consultation process and the resulting proposal – as indicated by several comments from all stakeholder sectors – are low, relative to what one would expect from the intensity and duration of stakeholder involvement. The penultimate meeting of the Steering Committee saw several aggressive attacks, predominantly by commercial farmers, on the manner and outcome of the consultation process. On several occasions there were complaints that the proposal belonged to the consultants, not the Steering Committee (minutes, 8 August 2000), and that the consultants were working for DWAF, not the people of the Inkomati. One interviewee commented that the consultants were actually driving the process, not DWAF, and implied that there was more mistrust, by many participants, of the consultants and facilitators than of government.

For example, responses to farmers' objections to the proposed institutional structure and associated pricing strategy were, prior to the penultimate meeting, that if they had a viable alternative to suggest then they should develop their own detailed strategy and present it to the group (Lubbe, pers. comm.; pers. obs., 9 March 2000). The farmers understood this to be a suggestion that they should hire their own consultant to develop an alternative proposal, which they saw as unnecessary if the consultants appointed by DWAF were truly intended to be working for them. One stakeholder grouping (the Malelane Cane Growers Association) officially denied ownership of the final CMA proposal, through requesting that it be stated at the beginning of the document that they do not support its contents (pers. obs., 8 August 2000).

All interviewees who participated in the proposal process said that they felt that they were heard, and one went on to say that they felt had some power to block the process if they disagreed with its outcome. However, Anderson (2002), who undertook an evaluation of the Inkomati proposal process based on an extensive interview-based study, reported that "many stakeholders in the participatory process felt that they did not have sufficient influence over the process" and that "these concerns were most apparent among representatives from sectors that

had the strongest objection to the proposal, such as the commercial and emerging farmers" (p. 156).

6.4.4 Commitment to implementation of decision outcome

Participants have generally shown minimal enthusiasm for implementation of the contents of the CMA proposal. At one stage of negotiation about the proposed pricing strategy, several white farmers suggested the possibility that they would refuse to pay the new water use charges (pers. obs., 3 May 2000). An extreme case, reported by two different interviewees, was that of farmers who had allegedly threatened, at a meeting held within their own sector, to shoot DWAF personnel if they try to come onto the farms to collect the Catchment Management Charge.

6.4.5 Acceptance of new government policy

Support for the role of a CMA in water resource management was not evident throughout most of the consultation process. On several occasions, suggestions were made (by commercial farmers) that irrigation boards had functioned highly effectively in the absence of a CMA, and could continue to do so without the additional expense of a new institution (Ligthelm, pers. comm.). Continual suggestions were made that the proposed size of the institution was inappropriately large, and that technology such as a Geographic Information System was unnecessary (pers. obs., 3 May 2000).

There also appears to be a perception among some white stakeholders, particularly farmers, that government's intention in the establishment of CMAs is chiefly to transfer their financial and administrative responsibilities for water resource management to the stakeholders (reported by one interviewee and reflected in comments made in workshops and IRG meetings). This perception was enforced by the consultant's failure to obtain clarity on a commitment for long-term financial contributions by central government to the running of the future CMA (the issue of government's financial commitment was listed in a summary of comments on the first draft of the proposal, distributed with minutes of IRG meeting of 3 May 2000).

However, by the time of the final two Inkomati meetings in late 2000 it was clear that most present agreed about the need for a CMA to be established as soon as possible. This was particularly evident in opposition voiced whenever someone suggested a delay in the process (for example, in the 8 August and 15 September IRG meetings, pers. obs.). The progressive change in perceptions of the desirability and necessity of a CMA indicates that over time the public participation process did create widespread 'buy-in' among participants for the institutional aspects of the new water policy.

6.4.6 Capacity building

Capacity building is a complex concept, which if assessed completely would require a far more detailed analysis than was possible in this study. However, one aspect of capacity building on which some comment can be made is knowledge-based learning. Participation potentially offers the opportunity to gain knowledge about government's intentions, the new water policy and law, and about water resource management in general. In addition the participatory process can potentially provide access to knowledge about other resource users, their needs, perspectives and experiences. Exposure to the latter can change both knowledge and attitudes and will be discussed as an element of both Capacity building (this section) and Relationships (Section 6.4.7).

Learning about the new water policy, and about resource management processes

DWAF's stated intention of informing stakeholders about the new water legislation (DWAF, 2000b) was certainly fulfilled to some extent, and for many participants. This was confirmed by Anderson's (2002) study, in which most interviewees commented on what they had learnt about "water legislation, water management and institutional structures" (p. 137). However, based on comments made and issues raised in the meetings observed in 2000, much of this knowledge is about legal and bureaucratic detail, more than a holistic understanding of the spirit and intention of the Act.

It was evident from observing discussions at meetings that the proposal process resulted in some commercial farmers in particular becoming self-taught experts in the details of the NWA, as they sought to establish and argue their rights under the new legislation.

In support of Anderson's (2002) results, all stakeholders interviewed (in my study) said that they had learnt a lot about the new water policy, and about resource management issues (which some referred to as 'nature conservation'). However, judging by comments made in meetings, and by interviewees' descriptions of their understanding of certain terms and concepts, there appears to be little understanding, even among more capacitated participants, of the fundamental changes brought about with regard to protection of the resource. The concept and purpose of the Ecological Reserve appears to continue to be generally misunderstood by all concerned, as indicated, for example, by comments such as "government must pay for the water they use for the Reserve" (pers. obs., 3 May 2000), and "so much water is being wasted by flowing into the sea" (stated by a stakeholder in the first workshop). Two stakeholder interviewees presented their understanding of the Reserve as water stored in a dam and made available for abstractive use during droughts.

Learning about the perspectives of others

There were many opportunities within the multi-stakeholder consultation process for participants to be exposed to the views and problems of other sectors and communities, and interviewees reported having benefited from these opportunities. One interviewee claimed to have learnt a lot about the problems of both emerging and commercial farmers, and another said that the participatory process had value in exposing people to others' circumstances, for example, people who have swimming pools at home got to listen to the stories of people who have no domestic water supply.

In particular, it seems there has been a growing awareness amongst commercial farmers of the frustrations of emerging farmers. On several occasions statements have been made by commercial farmers that they sympathise with emerging farmers' concerns and are of the opinion that DWAF should deal with them urgently. In one instance the chairman of one of the Irrigation Boards suggested that if DWAF continued to refuse to issue licences, emerging farmers should "just pump water anyway" (minutes, 9 June 2000). It was however quickly pointed out to him that emerging farmers require both a water permit and title deed in order to obtain the loan necessary to buy a pump.

However, despite the white farmers' stated sympathy with the emerging farmers plight, they have as yet failed to see their own role in having contributed to the 'over-allocation' of the resource, or their own potential to assist emerging farmers in obtaining some access to water without having to engage the legal dilemma faced by DWAF.

The value of the participation process in providing an opportunity to learn about others was confirmed by Anderson's (2002) study. Discussion about the issue of payment, for water and other services in 'white' areas, resulted in what was described as a 'breakthrough' for relationships between inhabitants of former homeland versus 'white' areas, when perceptions that water was cheap or free in 'white' areas were dispelled. The issue of relationship building will be discussed further in the next section.

6.4.7 Building networks and relationships

Though some learning about others' perspectives clearly did take place, in most cases this did not seem to progress to the level of improved relationships or the formation of new networks for mutual support. One interviewee felt that much better use could have been made of the potential the public participation process held to encourage inter-sectoral interaction and to discuss inter-sectoral issues.

It is not possible to gauge whether this improved understanding resulted in reduced inter-sectoral conflict within the participatory process, as most of the interaction that took place, and therefore also conflict that occurred, was not inter-sectoral but between individual stakeholders and DWAF and/or the consultants over the contents of the proposal. One interesting aspect of

the conflicts that did arise in the meetings in 2000 was that conflict resolution initiatives were often undertaken by the participants themselves. Often it was one of the other stakeholders, and not the facilitator, who attempted to mediate in conflicts between a particular sector and the consultants/government, when the process was in danger of being deadlocked. This was particularly evident in the 15 September meeting, when a group of emerging farmers threatened to block the process until a set of demands were met.

6.4.8 Inclusivity

The concept of inclusivity is understood to be broader than merely the representivity of the stakeholder group (Holmes and Scoones, 2000), and also includes participants' access to both the process and the contents thereof.

DWAF made special efforts to bring previously disadvantaged stakeholders on board, holding separate meetings to invite and prepare them for the initial phases of consultation, and targeting underrepresented sectors such as Emerging farmers and Local Government (DWAF, 2000c), and also subsidised attendance by refunding travel expenses. No such special efforts were however made to include women and representation at meetings remained heavily skewed toward males. However, this bias most likely reflects the gender balance of leadership positions in the water sector and Inkomati at this time, and would need to be addressed at this level first, if meaningful gender representation is ever to be achieved.

Use of the English language in all written material (with the single exception of the Executive Summary of the penultimate draft of the proposal), presentations and discussions at meetings, most likely resulted in restricted access to the contents of the process for many participants. No interpretation was provided, unless offered by a fellow participant and specifically requested at the time. Participants' ability to contribute to discussions was also constrained by a narrow and fairly inflexible agenda, which limited the contributions of those whose concerns were not considered to be relevant within this framework. The focus of discussion on institutional and financial models favoured contributions by those participants with the relevant technical knowledge, and financial or legal expertise, and effectively excluded those who did not have these interests or skills.

6.5 Likely procedural influences on outcomes achieved

Having described elements of the process (Section 6.3) of participation and evaluated the outcomes thereof in the previous section, this section will match process and outcome – and thereby offer an evaluation of the approach employed, in terms of the most important procedural aspects which affected the success of the overall process. This will be structured by discussing key procedural influences, and for each of these suggesting their likely effect on the outcomes and success of participation.

6.5.1 Public meeting format

The majority of Inkomati CMA proposal meetings followed a 'public meeting' format – attendance was not restricted to nominated representatives, and thus meetings usually involved over 100 people, of which only a few could realistically contribute to discussion. This format had an effect on at least three of the outcomes discussed in the evaluation undertaken above: the level of participation achieved, equity, and the opportunity to build relationships and networks.

Level of participation

All of the Inkomati meetings followed a 'public meeting' format – i.e. up to 150 participants in a large hall, seated facing forward, and facing the facilitator, consultants and government, who often made lengthy audio-visual presentations. Problems with public meetings are widely recognised, chiefly the very small proportion of participants who are able to contribute, and this form of participation is generally not used where substantial influence of participants is envisioned, or a high degree of ownership is required (Webler and Renn, 1995). As Thomas (1995 p. 115) contends: critics assert that "public meetings seldom permit the public to influence governmental decisions… (and) may be used only as rituals, providing the appearance but not the reality of public involvement." The Inkomati approach was however an improvement on the public meeting model, in that efforts were made to assemble a representative group of participants, which remained relatively stable over the consultation period, and which was involved from the earliest stages of policy development.

Equity

The public meeting format offered limited potential for achieving deeper levels of individual participation and for gathering detailed input from participants. The better-organised, articulate and informed stakeholder groupings were the only ones able to contribute meaningfully in the larger meetings. This is evident from the minutes of meetings: the majority of comments throughout the process were made by a few individuals, most of them white males.

Skilled facilitation is recognised as a means to compensate for the weaknesses of marginalised groups (Susskind and Cruikshank, 1987). However, facilitation of the Inkomati meetings merely fulfilled the role of chairman, controlling the order in which people spoke and at times forcefully redirecting discussion toward the agenda and away from issues perceived (by the facilitator) to be off the topic or agenda. (However, given the large numbers of people present at a single meeting, it would have been very difficult to facilitate a more inclusive, interactive and purposeful process.)

Relationships

It is likely that intersectoral relationships would have been built more effectively had meetings involved more of stakeholders talking to each other rather than to DWAF or the consultants. However the size and format of the Inkomati meetings in particular prohibited this type of interaction. Facilitation of this dialogue was better for the subcatchment meetings, which were much smaller, and allowed more inclusive discussion.

6.5.2 Decide-Announce-Defend (DAD)

Though DWAF's stated approach to stakeholder consultation was to be one of sourcing issues prior to producing documentation (e.g. as stated in Dr Ligthelm's presentation of 3 February 1999), from the earliest stages discussion documents preceded most discussions (DWAF, 2000b). The first draft of the proposal itself (a 331 page document) was only produced after two years of deliberation, though for the Sabie and particularly the Sand this was still very early in the consultation process. The views of certain stakeholders that consultation merely entailed having a document presented to them for comment (e.g. Nyathi, pers. comm.) may therefore be justified for this catchment.

Once the draft proposal was 'on the table', the subsequent consultation process appeared reminiscent of the classic 'top-down' governance approach of 'Decide-Announce-Defend', in which it appeared to be very difficult for participants to effect any significant changes to the document. The general routine followed was to distribute a document, gather written comment on it, and then hold a meeting to discuss both the document and the comments received. Discussion at this meeting usually revolved around the consultant defending the contents of the proposal. This created the impression of DWAF perceiving a subordinate role for public inputs to the process. It is likely that this impression was responsible for low perceptions of ownership by stakeholders of the final proposal.

6.5.3 Agenda for discussion

The agenda of the Inkomati process, and each meeting held within it, was essentially provided by the Act's requirements for the contents of a CMA proposal. This very narrow interpretation of the purpose of participation resulted in an inflexible process, focused on the achievement of a specific statutory product. This narrow and rigid focus thus influenced the inclusivity and equity of the participatory process and outcome. In essence the agenda assigned relevance to certain stakeholders' motives for participation, and not others, and thereby marginalised some stakeholders' concerns thus reducing their 'buy-in' to both the process and outcome.

A product-oriented and inflexible agenda and process

In most participatory processes, including those in which substantial power-sharing occurs, the organizing agent, i.e. usually government, still has considerable power in its potential to initially frame the issues for debate (Holmes and Scoones, 2000). Eventual reframing of these issues is a potential but often unrealised benefit of public participation.

The power which participants enjoyed to change the terms of their own consultation in the Inkomati was minimal. Though facilitators did allow the discussion of other issues, and concerns were recorded and, it was stated, would be referred to other forums (DWAF, 2000b), these issues were never allowed to change the focus of the process. This inflexibility possibly reflects an overemphasis on legal and administrative constraints by those managing the process.

In the Inkomati process, the NWA, the requirements for the contents of a proposal, and Dr Ligthelm's and the consultant's narrow interpretation of the scope of the stakeholder consultation process, all resulted in the issues for debate being framed in a highly linear and inflexible format. Discussion was structured to follow the list of requirements for a CMA proposal in a sequential, non-iterative manner. DWAF and the consultants also set the agenda both explicitly and implicitly through the continual presentation of discussion documents to which participants were expected to react. One interviewee reflected this narrow focus, in their comments that the participatory process was too product-oriented – it focused on the CMA proposal, whereas it was more important to use the opportunity for bringing the sectors together. One of the workshop participants also suggested that an emphasis on the role of a future CMA – at least at the beginning of the participatory process – would have been more useful than debating the details of an institutional structure. This was also a conclusion of Anderson's, who proposed that the "predetermined and inflexible meeting agenda limited opportunity for open dialogue" (2002, p. 139), and that the CMA proposal process had "potential for a more comprehensive, multi-dimensional learning experience" (2002 p. 107).

An inequitable outcome through the non-inclusivity of the agenda for discussion

The lack of an equitable influence on the proposal process and outcome between different stakeholder groupings is partly a reflection of power imbalances between participating sectors, but also reflects the greater power of government to frame the terms of the participatory process and the relative relevance of the issues therein.

The relevance of the product-oriented agenda (essentially focused on the structure and funding of a CMA) to previously disadvantaged representatives was minimal. The interest of the majority of black participants was in allocations and domestic water supply. Allocations were however seen as the function of a CMA, not considerations to be entertained in the process for its establishment. Domestic water supply, as was repeatedly explained by Dr Ligthelm

throughout the process, is not a CMA or DWAF function, but is the jurisdiction of Local Government and Water Boards, and was thus excluded from discussion.

The presence of large numbers of emerging farmers and other previously disadvantaged representatives at the meetings was a result of direct intervention by DWAF (Woodhouse and Hassan, 1999; DWAF, 2000c), even though at the time it could easily have been predicted that their concerns, such as allocations and domestic water, would largely be found outside the intended scope of the consultation process. The relevance of the agenda to these stakeholders could however have been improved substantially through allowing more discussion of the role, functions and operating principles of a future CMA as opposed to the myriad details of its structure and administration.

Interviewees and participants in our workshops expressed the view that they would have benefited from this kind of exercise, in which they developed their own vision for what a CMA could and should do, and how this would benefit them, instead of simply being told at the start of the proposal process by DWAF and their consultants that a CMA was necessary and mandatory. Anderson (2002 p. 136) even goes so far as to say that the "emphasis on institution building exasperated numerous people in the process, creating the perception that government was more concerned about institutions than with their needs" and that the focus on institutional aspects prevented some stakeholders from engaging in the process.

By this framing of issues through the agenda and focus of meetings, white farmers were thus further favoured through the coincidence of their interest in participation (chiefly the proposed charges for irrigation water) with the intentions of government in initiating the participatory process (e.g. to reach a decision about the funding and structure of the new institution). Though this alignment was unlikely to have been intentional, on behalf of DWAF or the consultants, it may be argued that the lack of coincidence of the concerns of marginalised groups with those of government is not simply a matter of chance, but reflects their classification as 'marginalised' and is one of the democratic motivations for the use of participatory processes in policy-making. Those organising participatory processes should be aware of the danger of inadvertently entrenching this bias, and of the need to counter this situation using more open and inclusive agendas for discussion.

6.5.4 Failure to develop a shared understanding of the 'context' of WRM and the role of the CMA proposal process therein

The use of an exploratory, issues-based exercise at the beginning of the process, aimed at building a shared understanding of the context of WRM, and the various sectors' issues within this context, could have helped to set a more relevant agenda and sequence for the rest of the participatory process. Such an exercise would also have given the opportunity to those with the most pressing issues and personal agendas to express these openly at the start, instead of trying repeatedly and inappropriately (relative to the agenda) to insert them into the ongoing process. Exposure to the issues and positions of other stakeholders could have led to a greater

understanding of the challenges faced by different stakeholder groups, and possibly to the discovery of common aspirations for the future of the water resource.

6.5.5 Role of power imbalances in determining the outcome of the participatory process

As discussed in the theoretical framework (Section 2.8), the likelihood of an equitable outcome as the logical consequence of a fair, or at least impartial, participatory process, is dependent on an assumption of equality in the power held by participants. In the presence of power imbalances some participants can have a dominant influence on the process and outcome of participation, resulting in distributive decisions that mirror the pre-existing inequities between stakeholders (Both Ends, 2000).

Power imbalances as a legacy of the past

Commercial farmers held substantial bargaining power through their awareness of their key role in revenue generation to support the CMA. In the Sabie-Sand catchment farmers argued their greater financial contribution to be justification for being granted greater representation on the CMC (the 'pay – say' principle), which they subsequently achieved (minutes, 9 March 2000). Emerging farmers potentially have considerably greater political power, which they generally did not attempt to use, except in the case of references to 'the Zimbabwean situation' in the final meeting (pers. obs., 15 Sept 2000), and their subsequent attempts to stop the establishment of a CMA until their demands were met.

The most extreme imbalance in bargaining power resulted from the vast differences in access to water between those with 'existing lawful use' (protected by policy until such time as the Reserve has been set, and a Compulsory Licensing process begun), and those consistently denied any form of permission to use water. This imbalance is likely to have even more influence in future participation in the development of a resource allocation strategy by the CMA. Competing stakeholders will be negotiating from extremely inequitable positions in this regard, and an equitable outcome is thus highly unlikely. This has already been shown to be the case in the Olifants WMA, where emerging farmers have been unable to engage the negotiation process for new allocations (Greenberg, 2000 p. 33), because they "have neither the resources nor the experience to engage at the same level [as the more organised sectors such as mines and industry] at present". Instead, "water slips through their fingers" (p. 32).

Power imbalances due to the structure and process of participation

The existence of extreme inequities between stakeholders in the Inkomati basin is a reality that is not likely to change in the near future. The resulting inequitable distribution of power and

influence within the consultation process reflects this reality, but was also intensified by the structure and process of consultation and participation.

Several procedural aspects of the consultation process indicate that little attention was paid to the need to address the potential influences of this imbalance of power. The role of the agenda and public meeting format in exacerbating the effects of power imbalances has already been discussed (Section 6.5.1 and 6.5.3). Other influences arose from unequal access to meetings, ability to contribute and access to information and other resources.

Previously disadvantaged communities had fewer resources to attend meetings. They were reimbursed for travel expenses to subcatchment meetings, but this practice was not consistent for the entire series of joint Inkomati meetings (pers. obs.; Anderson, 2002). Most of these stakeholders also live furthest from meeting venues. As meetings were always held on weekday morning or afternoons, it is likely that several representatives left their work or jobs to attend the process. Previously disadvantaged stakeholders, particularly those not yet having access to the resource, were likely to hold jobs or undertake work unrelated to their representation. It would thus have been difficult to get permission from employers to attend meetings, which often lasted several hours. By contrast, several of the other participants attended in the context of their employment, or own business interests.

Predominant use of written communication and the English language put the majority of black stakeholders at an immediate disadvantage in understanding and contributing to the process. No interpretation occurred, except where occasionally specifically requested by a speaker, and then carried out by other participants.

Finally, the empowerment of participants was expected to result from their participation, and it seems that little was done outside the broader consultation process to assist previously disadvantaged participants to initiate empowerment prior to 'participation', so that this participation might be more meaningful. The more powerful and organised stakeholder groupings were able to draw on substantial resources to gain information and negotiating power. For example, the commercial farmers hired a lawyer in order to clarify their rights, and enable them to argue against consultants' interpretations of the NWA's implications (pers. obs., 3 May 2000).

6.5.6 Pressure for consensus

Throughout the consultation process a principle of seeking consensus, and avoidance of voting, was pursued, in accordance with the principles of the NWA. As discussed in Chapter 2, proponents of more active and interactive participatory processes emphasise consensual processes as crucial to achieving ownership and buy-in to participatory decisions. However the issue of consensus is subject to much debate within public participation theory. In the absence of skilled facilitation toward consensus, the requirement for consensus may be used simply to quench dissent, and reduce the variety of opinions or perspectives that are expressed

about a particular proposal. This may indicate an abuse or misunderstanding of consensus concepts within the process – used as a means to force a rapid and 'trouble-free' decision, the quest for consensus may play the same role as voting in short-circuiting necessary deliberation and discussion.

In some of the Inkomati meetings observed, people who raised contrary opinions, or who tried to stimulate further discussion of a decision or suggestion, were portrayed by the facilitator or their fellow participants as delaying consensual decision. In truly consensual approaches conflict and the airing of diverse perspectives is an integral part of reaching consensus (Susskind and Cruikshank, 1987; Kaner *et al.*, 1996). In one Sabie-Sand meeting to nominate CMC members the requirement for consensus was used by the facilitator to exert pressure on a participant to withdraw an alternative proposal, and therefore enable the group to reach a quick decision (pers. obs., 9 March 2000). A failure to reach true consensus in parts of the Inkomati process is reflected in the withdrawal of the CMC nominations from the final proposals, even though these were reported to have been achieved by consensus decisions in their respective subcatchment meetings.

The requirement for consensual decision-making was also used to argue that the number of representatives of a particular sector on a CMC or CMA board was irrelevant to achieving the ends of balancing sectoral power, because consensus decisions do not involve voting. This argument was however part of an attempt to justify the granting of greater numerical representation on boards to sectors using the most water and therefore making the greatest financial contribution towards the CMA (the 'pay-say' principle).

6.5.7 Spatial scale of participatory groups

The use of a public meeting format, and the depth of participation achieved, is due in part to the constraints of scale. Under the NWA a CMA had to be established for the Inkomati WMA, and the WMA was therefore the ultimate spatial focus of the participatory process, though several subcatchment meetings were held before bringing the entire WMA together in the Inkomati meetings. From minutes of the various subcatchment meetings, and observation of a Sabie-Sand subcatchment meeting in 2000, it appears that stakeholders were making positive progress in their subcatchment meetings. The smaller group size and geographic area, and the greater physical connectedness of the catchment of a particular river, resulted in more inter-sectoral interaction, and less 'anonymity' of participants in the subcatchment meetings. From comments made by interviewees and workshop participants it is evident that the majority of stakeholders identify with their subcatchments, but not the greater Inkomati. There is thus a greater incentive to take part in subcatchment initiatives than WMA-level processes.

There also seemed to be greater mistrust of stakeholders from other subcatchments than one's own, with accompanying fears that one subcatchment may need to subsidise another's resource use in order to meet required flows to Mozambique, or through funding the greater need for infrastructure or management interventions in another subcatchment.

The focus on achieving representivity seemed to result in a principle of involving as many people as (logistically) possible, possibly due to recognition of the importance of creating widespread awareness and achieving maximal transparency. However the large number of people at the Inkomati meetings possibly worked against achieving true inclusivity and generating good understanding of the concepts involved, as few people could really be reached in the public meeting format used.

6.6 Conclusion: Achieving equity and sustainability through participation in the Inkomati CMA proposal process

The Inkomati CMA proposal process achieved relatively **'shallow' participation**, resulting in **low perceptions of ownership** among participating stakeholders. This outcome was mainly due to the use of a public meeting format, requiring relatively passive participation by attendees, and a Decide-Announce-Defend approach to consulting stakeholders about the proposal contents. The use of a **product-oriented agenda**, and the **absence of an integrative and holistic context-building process** (which could have illustrated the relevance of the proposal contents within the broader WRM process), limited the potential benefits of participation for the majority of stakeholders. The process was *only* about a CMA proposal, whereas it could also have been used to serve more general WRM goals, not least of all the improvement of understanding and relationships among the participating sectors.

The premise underlying the design of the overall process seemed to be one of "set the institution (CMA) up properly and the rest will follow". However the reality is that many stakeholders could as a result be too fatigued and disillusioned to participate in this institution.

6.6.1 Continued inequity threatens future sustainability of resource use

The outcome of the participatory process was **inequitable** in the sense that some sectors' issues received attention whereas others did not. There was inequity in participants' ability to contribute to the process, and this was enhanced by the **narrow agenda** for discussion, the large group size, and use of the English language with no interpretation provided. The narrowly framed agenda and purpose of the process privileged (albeit unintentionally) the contributions of some stakeholder sectors and regions above others. The main water resource management issues concerning the majority of previously disadvantaged stakeholders were not considered to be within the scope of the process. The issue of new allocations thus achieved no address and little clarification. The status of 'stressed' allows DWAF to refuse new allocations and protect historic ones under the new water law, until such time as the Reserve is determined. It is highly likely that the setting of the Reserve will result in less water being available for allocation, not more, and new applicants will then have to wait for DWAF – or the CMA, if it is operational by then – to call for 'compulsory licensing' in order to be able to

redistribute water from 'existing lawful use'. This precautionary approach is in keeping with the NWA, and in the interests of resource protection, as DWAF cannot risk issuing any further allocations for a clearly already over-allocated resource.

However, this rigid stance has potentially created **negative perceptions of the Reserve** and resource protection aspects of the new water policy, by those seeking new allocations, and who are effectively being made to bear the cost of protecting a resource they are not presently allowed to benefit from. (At the same time, it appears that little use was made of the opportunity provided by the participation process to educate stakeholders about the resource protection aspects of the new water law; the concept of the Reserve continues to be misunderstood.)

Though the constraints of the NWA are recognised, if the future implementation of this law, and the future sustainability of water resource use, is to be promoted, some way must be found to deal with Emerging Farmers' considerable frustrations - in the more immediate future. The strict enforcement of the moratorium on new allocations perhaps reflects more of a legal and bureaucratic concern than one for resource protection. The amounts of water required would in most cases have minimal impacts on the resource (Woodhouse and Hassan, 1999).

6.6.2 Building a platform for future participation in the Inkomati CMA and WRM

Many stakeholders were frustrated by the length and repetition of the process, ultimately resulting in **fatigue** and **disillusionment** for some participants. A number of important issues relating to the broader context of WRM, and pertinent to the process of setting the Reserve or developing a Catchment Management Strategy were raised, yet these were not used or recorded in any integrated way, and have essentially been 'lost' and will have to be raised and discussed again.

Little use was made of the opportunity the process offered to build **inter-sectoral understanding** and **relationships**, as the process was focused on stakeholders delivering inputs to government and the consultants and vice versa, and did not encourage interaction between stakeholders themselves.

One positive feature of the process was the attention paid in the early stages to the issue of 'representivity' and the active attempts to improve representation of previously disadvantaged stakeholders. This has built a broad base of representation on which future participatory processes will be able to draw.

The following chapter (Chapter 7) investigates a case study of participation toward another specific product/decision required by the NWA, in which the concept of representation, and the requirement for participation, was interpreted and approached quite differently. Both case studies, and thereby the assessment of current implementation approaches, will be concluded at the end of Chapter 7.

CHAPTER 7:

STAKEHOLDER PARTICIPATION IN THE DETERMINATION OF THE ECOLOGICAL RESERVE FOR THE OLIFANTS RIVER

7.1 Introduction

As explained in Chapter 4, the Olifants and Inkomati case studies were conducted at different levels of detail, and with a different focus. Therefore this chapter will follow a slightly different structure to the previous one: evaluation of outcomes is addressed in less detail, and discussion of processes will focus on the approach to decision-making and the interaction between specialists and stakeholders. But, as for Chapter 6, this chapter will follow an overall structure of describing the case (process elements), evaluating outcomes, and then discussing the likely procedural influences on these outcomes.

The following account is based mainly on the set of documentation resulting from the process (in the form of internal project proposals and reports, reviewers' reports, newsletters, meeting minutes and copies of presentations made at meetings), and attendance of the penultimate stakeholder meeting (the Pre-confirmation meeting).

7.2 The Olifants Water Management Area

The Olifants WMA (Figure 7.1) is located in the north-east of South Africa, and comprises parts of the Mpumalanga, Limpopo and Gauteng provinces. The Olifants River basin is one of the largest in South Africa, with an area of approximately 54 575 km^2 (BKS, 1998). The river arises in the Witbank-Middelburg area of Mpumalanga and flows eastwards, entering the Kruger National Park at Phalaborwa, and ultimately joining the Limpopo River in Mozambique. Major tributaries include the Wilge, Klein Olifants, Moses, Elands, Steelpoort, Blyde, Selati and Timbavati rivers. The catchment can be divided into four zones, on the basis of altitude: Highveld; Middleveld; Drakensberg and Lowveld (BKS, 1998).

Run off is strongly seasonal, with shortages commonly being experienced by water resource users in the last few months of the dry season. Major water users, in order of annual

consumption estimates, are agriculture, mining, forestry, domestic use and industry. The Olifants system is anticipated to be facing large increases in demand, particularly from industry, mining and domestic use within the next decade (BKS, 1998). The Kruger National Park is a non-consumptive resource user, which is extremely vulnerable to the impacts of upstream stakeholders on both quantity and quality. Water quality in the upper reaches is influenced by coal mining, industrial activities and power generation. In the middle reaches quality is impacted by overgrazing, soil erosion, irrigation return flows, and run-off from rural settlements. In the lower reaches, mining and industrial activities at Phalaborwa negatively impact on the quality of water entering the Kruger National Park (BKS, 1998).

Increased demand, particularly in the Phalaborwa and Gravelotte areas, motivated an investigation into the 'Ecological Water Requirements' of the Olifants River (BKS, 1998). In January 1998, before the National Water Bill or Act had been passed, DWAF launched the Olifants River Instream Flow Requirements (IFR) study. When the NWA was passed this study then became known as OREWRA (Olifants River Ecological Water Requirements Assessment), an application of which would be the setting of the Ecological Reserve for the Olifants River, "based on a desired future state of the river, which will be determined in consultation with all stakeholders" (BKS, 1998 p.1-1).

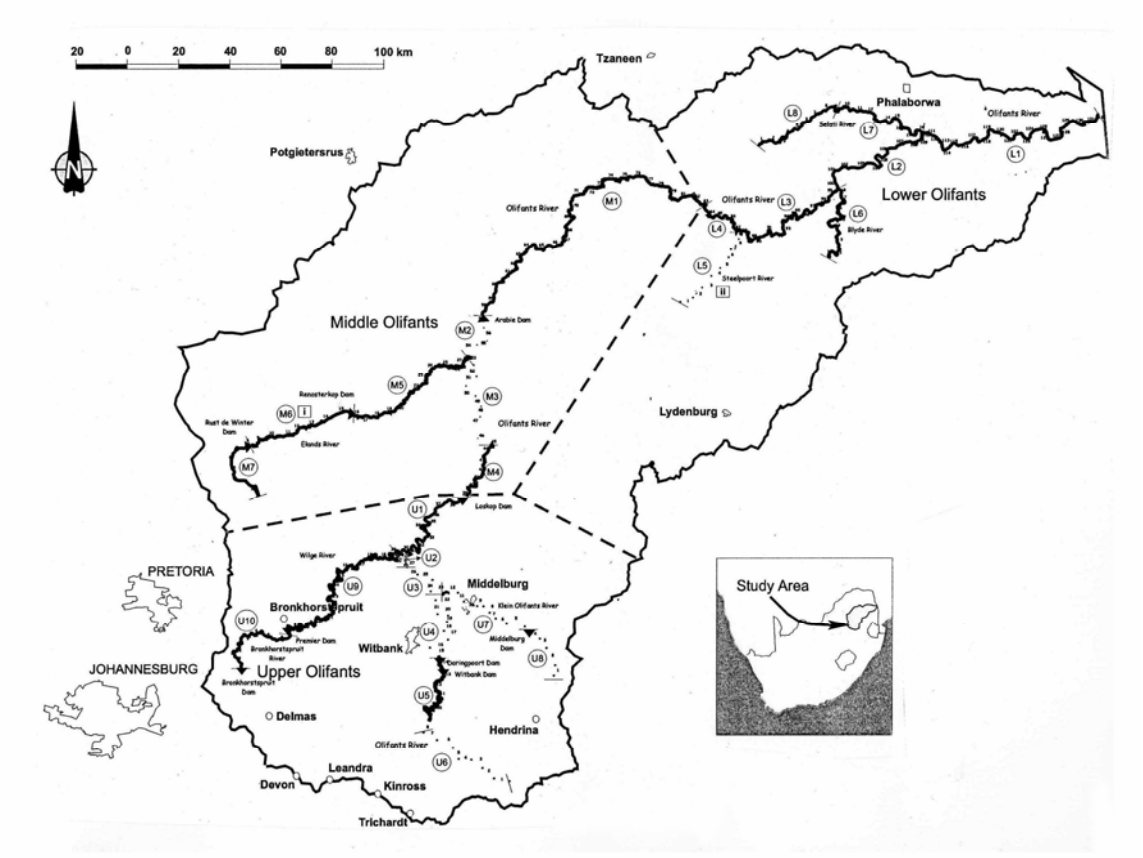

Figure 7.1: The Olifants Water Management Area (From BKS, 1998)

7.3 Public participation in the Olifants Reserve determination process

The process of Reserve determination, within the overall process of resource protection, is not prescribed by the Act. In 1999 a set of guidelines was developed to direct implementation of the resource protection and Reserve concepts contained in the Act (DWAF, 1999a). However, these did not offer any details as to the participatory aspects of this process. Participation is only required for what was at the time referred to as a 'Comprehensive Reserve' determination. Government and consultants working on the first Comprehensive Reserve process to be conducted in South Africa – i.e. for the Olifants River – were thus piloting this process. The Instream Flow Requirements (IFR) process on which the Reserve is based had already been conducted for several rivers in South Africa at this time, but this process did not incorporate public involvement.

The position of the 'Reserve' within the overall water resource management process is explained in Chapter 3 (Section 3.4) and presented in Figure 3.1. The sequence of decision-making followed in the Olifants study was as follows (OREWRA Inception Report, February 1999):

- Describe the Present Ecological State (PES) in the form of 'Classes' equivalent to EMCs.
- Describe a Desired Future State (DFS) for the river and its reaches, and assign Ecological Management Classes (EMCs) to reflect this.
- Determine the Instream Flow Requirements (IFR) to achieve the EMCs and test the implications of these for resource use.
- Set the Ecological Reserve, based on the IFR and resource quality objectives.

The process of Reserve determination was overseen by a DWAF Management Team, and was undertaken by a team of consultants, with separate appointments of teams of 'Management Consultants', 'Ecological Consultants' and to manage the Public Involvement Programme (PIP). Two independent reviewers were also appointed to evaluate the overall Reserve determination process.

7.3.1 Overview of the Public Involvement Programme

The participatory aspect of the Reserve determination process was referred to as the Public Involvement Programme (PIP). It consisted of six meetings and three regional 'capacity building' workshops, all held between January 1998 and February 2000.

The PIP began in January 1998 with a public meeting at Loskop Dam, the stated purpose of which was to introduce the study, clarify concepts and methodologies (features of the Olifants catchment, the NWA and Reserve) and to reach consensus on the process, its objectives, the study area, the methodology and the identification of other stakeholders. Stakeholder

nomination of sectors and their representatives to take part in the future process took place at this meeting (minutes, 28 January 1998).

In April 1998 a second public meeting was held. This meeting aimed to finalise the composition of the Stakeholder Committee, and to address some of the issues raised in the first meeting. These included concerns about stakeholders' ability to comment on Reserve methodology, concerns about the link between the IFR and allocations, lack of clarity about the procedures for representation, and concern about poor attendance by some sectors. In an effort to encourage more active participation of stakeholders and better understanding of the information presented, a workshop format was used, with participants subdivided into discussion groups (minutes, 21 April 1998). Agreement was reached that the Olifants River Forum (ORF) would serve as a vehicle for the Steering Committee and that six stakeholder nominees would be co-opted onto the ORF committee for the duration of the study, to ensure representivity. (The ORF is a multi-stakeholder forum organised to coordinate voluntary management actions by members in relation to the Olifants River.)

After the second public meeting it was decided that additional training of stakeholder participants would be required prior to the DFS workshop so that they could understand and contribute meaningfully to this decision. Therefore in August 1998 a preparatory workshop was held in each of the three zones – upper, middle and lower – of the Olifants catchment. A comprehensive 'Information Pamphlet' aimed at less technically capacitated readers was also distributed at this time in preparation for the DFS workshop, along with a questionnaire to guide representatives in consulting with their constituents about their sector's perspectives on a DFS (minutes, 11, 12 and 14 August 1998).

In May 1999 the Stakeholder Committee met for the first time, to examine the Present Ecological State (PES) of the Olifants River. The Ecological Consultants presented the results of their ecological and social studies, and their assessment of the PES in the form of current classes for each reach of the Olifants and its tributaries. It was explained that these classes were not conclusive, and that stakeholders should make a contribution based on their knowledge of the river (PES meeting minutes, 19 May 1999).

In May 2000, a full year after the PES meeting, the Stakeholder Committee and project team met to discuss the Desired Future State (DFS) of the Olifants River. The purpose of this meeting was described as being "to provide DWAF with the background information that is required to arrive at an Instream Flow Requirement" (DFS meeting minutes, 2 May 2000 p. 3). The ecological consultants presented their recommendations for EMCs to the group, after which information about stakeholders' preferences for the ecological state of various river reaches was gathered by means of questionnaires (DFS meeting minutes, 2 May 2000). This process will be described in further detail in Section 7.3.7 (Decision making process).

In November 2000, a meeting referred to as the 'pre-confirmation meeting' was held to present the IFRs, (calculated from the EMCs) and the implications of these for water availability, to stakeholders and thereby provide opportunity for comment. A pre-workshop session was

organised to acquaint new or replacement representatives with the background to the study and the concepts needed to understand the IFRs. This session included a river awareness course held on the banks of the Olifants and Selati Rivers. Presentation of the IFRs by the consultants concluded that on the whole it had been determined that the IFR would not have a large impact, with the exception of three critical areas (minutes, 23 November 2000).

A final stakeholder meeting was held in February 2001, to 'confirm' the suggested IFR and Reserve. This meeting again involved presentations on the implications of the IFR for each sector, feedback from stakeholders, and ultimately agreement that the proposed IFR could be presented to the DWAF technical committee and then the Minister (minutes, 27 February 2001).

7.3.2 Representation

It was clearly intended that the direct consultation and decision-making process should involve only a select, and consistent, set of nominated representatives. The purpose of the first and second public meetings was to establish such a group, which was acceptable to all stakeholder sectors. However it seems (based on comments in the DFS workshop about the number of 'new' representatives') that this ideal was not achieved, with changing representatives and 'uninvited' participants creating discontinuous and possibly 'illegitimate' representation. One DWAF official commented that the most vocal (and oppositional) participants at the DFS meeting were uninvited stakeholders apparently not representing any nominated sector (DWAF project team response to reviewer's report on DFS workshop, 6 November, 2000). The issue of representation was apparently of ongoing concern to stakeholders as it was repeatedly raised at meetings. Concerns (expressed by various stakeholders at meetings throughout the process) included: that more people should be involved, that representatives don't attend meetings, that representatives change, and that lay people may not be qualified to comment on a technical process (minutes, 28 January 1998).

The stated purpose of representation on the Stakeholder Committee was that the nominated individuals would take on the task of consulting with their constituents (Information pamphlet distributed to stakeholders prior to the August 1998 'Preparatory Workshops'). No analysis of the extent to which this consultation actually took place appears to have been undertaken. Though an attempt was made to get an indication of each representative's mandate and constituency in the DFS questionnaire, it does not appear as though responses to these questionnaires were ever submitted to the project team, and thus no evaluation of this is possible.

7.3.3 Feedback and communication

Interaction between the project team and participants outside of the process took place through written communication, in English, which was distributed by post. Invitations and minutes of

meetings were sent to all listed representatives. Four newsletters were also sent out over the course of the PIP, and on one occasion an 'information pamphlet' and questionnaire were distributed to help participants prepare for the 'capacity building' workshops and the Desired Future State workshop. The Olifants River Forum ran regular reports on progress in their newsletter (also published only in English).

7.3.4 Meeting times and venues

With the exception of the 'capacity building' workshops, meetings were held for the entire catchment, at a central venue. Meetings were held on weekdays and some meetings or workshops lasted for two to three days, and therefore required a substantial commitment of representatives' time. DWAF reimbursed transport costs (pers. obs., 23 November 2000) and provided accommodation and food.

7.3.5 Decisions to be made

The first two meetings required, primarily, that agreement be reached on a system of representation (minutes, 28 January and 21 April 1998). Once the Steering Committee was established the rest of the meetings focused on, respectively, the PES, DFS and finally the IFR. Within these the main stakeholder decision and input was, ultimately, the Desired Future State, as this was the decision ultimately concerning value judgements and trade-offs.

7.3.6 Agenda for, and contents of, discussion

The agenda for each meeting reflected the extent of progress within the Reserve determination process at the time, but in the early stages also included issues such as allocations and CMAs. These were peripheral, but were raised by participants, and, at times, were permitted to be discussed. At other times (e.g. the latter half of the meeting on 28 January 1998), the issue of allocation was dismissed as being outside the scope of the process (minuted that a question to the project team was not answered due to being an 'allocation' issue, 28 January 1998). The concept of CMAs was purposefully introduced by the project team and discussed in groups in the second meeting (minutes, 21 April 1998).

7.3.7 Decision making process

The main decision to be reached within the overall process was the DFS, which was expressed as a set of EMCs. This decision was framed in technical, ecological terms, and an extensive process of 'education' was used to get stakeholders familiar with these terms. Aspects of the overall decision-making process are discussed in detail below.

Sourcing stakeholder preferences

Preparation for the DFS workshop began with a questionnaire sent to representatives prior to the 'capacity building' workshops in August 1998, and which was designed to assist representatives prepare inputs on their sector's perspectives of the DFS. It was stated that it was hoped that this questionnaire would stimulate dialogue within sectoral groups regarding their needs in relation to other sectors, which could prepare them for the consensus required at the DFS workshop (Information Pamphlet, date unknown). This document consisted of two parts. The first was a checklist designed to categorise respondents: by their sector, relationship with the resource, and geographical scale of interest. The second part called for written responses to questions about how other activities impact on their use of the river, and vice versa, their contribution to the economy, and plans for future development. This also included questions to determine whom the respondent had consulted in preparing their response, and what mandate they had to represent those consulted. Finally, the question about a Desired Future State was posed as "What is a realistic ecological state of your part of the Olifants river catchment, and river as whole?"

The PES workshop explained the classification system for the current state, and which would also be used to express the DFS. At this workshop it was requested that input for the DFS should be made in writing and reach the team by 30 July 1999 (minutes, 19 May 1999), but no record of any such inputs ever being made can be found.

Integrating preferences to reach a decision

The DFS meeting, and the process of reaching stakeholder agreement on a DFS, began with presentation by the Ecological Consultants of their recommended EMCs and an explanation of the process taken to determine these. A new questionnaire was presented to participants, which they were told had been designed to capture information from them on their DFS of the river, and that this information would be captured on a spreadsheet and presented and compared to the specialists' EMCs (DFS minutes, 2 May 2000).

The questionnaire consisted of a matrix for scoring 'importance' and 'extent' of five aspects: 'Beneficial use' (irrigation, mining, industry, business, domestic, discharge effluent), 'Recreational' (fishing, canoeing, hiking, swimming, sense of place), 'Ecosystem' (ecotourism, rare/endangered species, protected status, migration corridor, refuge area), 'Social use' (stock watering, subsistence irrigation, household use, cultural, natural products), and 'Other'. A questionnaire was to be completed per reach, and only by those familiar with a particular reach, with the result that only one to three people gave input on any reach (DFS minutes, 2 May 2000).

As the 'Ecosystem' section was only filled in by participants from the environmental, mining and industry sectors, an attempt was made to gather this information in another table, scoring the importance of flow, quality, fish and plants for each reach, but this was also later abandoned at the request of stakeholders who argued that it would not be useful as they would simply score everything as 'high' (DFS minutes, 2 May 2000).

The results of the questionnaire exercise were presented as bar charts derived by averaging the collected scores for each criterion, for each reach. These were compared to the specialist results for EMCs, after which the stakeholders "accepted all the recommended Ecological Management Classes", "noting several general and reach-specific issues and concerns" (DFS minutes, 2 May 2000 p. 16).

7.3.8 Facilitation process

After the first meeting revealed the need to elicit and support more active participation, especially for the previously disadvantaged representatives, a lot of use was made of discussion groups in the second meeting and the three capacity building workshops. These discussions helped both with improving understanding of the information presented by the team and with getting comment from all participants, though it is not clear where much of this comment was taken up or reported on within the process.

From minutes of meetings, it appears that facilitation at best achieved the role of chairman. In general it seemed that there was little attempt at purposeful, integrated participation. Meetings often involved presentations and chairing of ensuing discussion by several different members of the management and consultant teams. At times two different members duplicated the information and purpose of presentations – thereby sending mixed or at best confusing messages to participants (e.g. at the first meeting on 28 January 1998, the new water policy, the concept of the Reserve, and the intended participation process were explained in presentations made by a member of DWAF and then again by one of the engineering consultants, using slightly different concepts and terminology).

7.3.9 Attention to 'capacity building'

The process was flexible enough to respond to a need identified early in the process for additional capacity building. Recognition of this need resulted in the change to a workshop format, and the introduction of three regional workshops to prepare participants for the PES and DFS process. Additional preparatory days were included for those who wished to take up the opportunity prior to the pre-confirmation meeting, and included the river awareness course.

The project team used what could be described as a fairly ambitious approach to trying to get stakeholders to understand and therefore to be able to critique the technical processes used; e.g. 'yield models' and 'duration curves' were explained to enable understanding of IFRs and

their implications. Preparation for the pre-confirmation workshop involved detailed explanation of the concepts and models used, with some success (pers. obs., 23 November 2000).

7.4 Evaluation of outcomes of the participatory process

As for the Inkomati case study, and as explained in Chapter 4, the approach taken to evaluate case study participatory processes was to examine processes by their outcomes, and then to use this assessment to link these outcomes back to the procedural variables likely to have contributed to them. These outcomes will be discussed, using the framework described in Section 2.11: firstly, the level of participation achieved as well as intended; secondly, an assessment of outcomes of the process, both product (e.g. quality of decision reached) and process outcomes (e.g. less tangible outcomes such as a sense of ownership, inter-sectoral relationships, improved knowledge and capacity). Finally, the key procedural elements that appear to have contributed to the outcomes observed will be discussed (Section 7.5).

7.4.1 Level of participation: Power-sharing between government and stakeholders

The degree of power-sharing intended by government is difficult to gauge, and can only have been perceived as ambiguous, based on statements made by the team to stakeholders about the importance of their role – as the following quotes illustrate:

- "The desired future state is not described in figures and numbers…. We do not want to prescribe the requirement, stakeholders should contribute to this" (minutes, 28 January 1998 p.11).
- "…representatives on the Stakeholder Committee do not necessarily have a 'mandate' to make decisions, but … they give valuable input into meetings concerning issues that may influence their interest groups" (PES minutes, 19 May 1999 p. 2).
- "The Desired Future State (DFS) is the state of the natural and socio economic environments associated with a river, as defined by the people who use that river" (Information Pamphlet, preface).
- "Such dialogue could go a long way to preparing all for the consensus that will be required at the DFS workshop" (Information Pamphlet, preface).
- (DWAF) "would like the stakeholder committee to provide it with the Desired Future State (DFS) (DFS minutes, 2 May 2000 p. 3).
- "…emphasised that the purpose of the meeting was not to get stakeholder approval or permission, but to listen to the stakeholders (Pre-confirmation meeting minutes, 23 November 2000 p. 6).
- "The Stakeholder Committee is not a decision-making body but a consultative body" (Preconfirmation meeting minutes, 23 November 2000 p. 6).

- "It was therefore never the intention of the Project Team to … achieve approval or seek consensus on any aspect of the project, especially not on the desired future state" (letter sent to reviewer by DWAF project team in response to reviewer's report on DFS workshop, 6 November, 2000).

At the pre-confirmation meeting in November 2000, stakeholders were told that the team did not need their approval of the decision that was made, but that they could submit objections to the Minister once the Reserve was gazetted (pers. obs., 23 November 2000).

The central decision of the OREWRA process – the EMCs – did not change due to stakeholders' involvement, and could presumably therefore have been decided by the Ecological Consultants acting alone. Very little information about stakeholders' needs, values or preferences could, or was, actually garnered by the project team. The stakeholders did however have some influence on process design, and contributed some information to the PES assessments.

7.4.2 Product outcomes

The 'product' of the Reserve determination process was ultimately the decision reached about an Ecological Reserve, with supporting decisions being the Desired Future State and the IFR designed to achieve this state.

Wise?

Given that little information about stakeholders' needs or knowledge in relation to the water resource was successfully obtained, it is unlikely that a well-informed Desired Future State or Ecological Reserve was achieved.

Fair?

As only certain sectors (Kruger National Park and conservation representatives) could contribute to the discussion of their needs in the form of ecological variables, and only existing water users could comment on the impacts of the proposed IFRs, it is unlikely that the decision reached treated all interests equally.

Stable?

Ultimate stability of the outcome will depend on the sense of ownership that was achieved of the final decision, and whether the recommended Ecological Reserve will be contested, both before and after it is approved by the Minister. The presentation of the EMCs and IFRs did

not elicit any objections from participants, though negative comments were made regarding the process (see below).

7.4.3 Sense of ownership, commitment to implementation

The extent to which participants perceived ownership of the product and process of their participation is difficult to gauge from minutes or observations. No resistance was expressed to the recommended EMCs or IFRs. However the pre-confirmation meeting did elicit comments such as "why should 'goggas' and fish get water when people don't have any?" (pers. obs., 23 November 2000). The DFS meeting also attracted complaints about the process and about representation (DFS minutes, 2 May 2000).

The absence of a direct link between the majority of stakeholders' comments and inputs, and the outcome of the process, suggests that high levels of ownership are unlikely. Strong buy-in to the concept of the Reserve was also not evident.

7.4.4 Capacity building

Observation of the 'refresher' capacity building course held in preparation for the pre-confirmation meeting indicated that many of the participants had learnt a lot about the new water policy and about water resource management issues and concepts over the course of the participatory process. However, the outcome of the DFS workshop indicated that technical capacity building efforts had not been sufficient to enable participants to give their inputs to the process in the format desired by the team.

7.4.5 Inclusivity

Use of the English language, and the generally highly technical nature of presentation and discussions, excluded previously disadvantaged stakeholders to some extent. Additional capacity building interventions were designed to help counter this potential exclusion, by educating stakeholders about the technical concepts and language used. Most of the comments and questions raised were by previously advantaged participants, though more questions by previously disadvantaged stakeholders were evident as the process progressed.

With the exception of the 'Information Pamphlet' developed for the Capacity Building workshops, the accessibility to the average stakeholder of the documentation provided to participants was minimal. Documentation generally made use of a lot of technical terminology, and was written in an academic style. For example, use was made of phrases like 'will be fed into a spreadsheet' (DFS workbook, p. 27; Capacity Building workshops).

7.5 Likely procedural influences on outcomes achieved

Having described elements of the process (Section 7.3) of participation and evaluated the outcomes thereof, in the previous section, this section will match process and outcome – and thereby offer an evaluation of the approach employed. This will be structured by discussing key procedural influences, and for each of these suggesting their likely effect on the outcomes and success of participation.

7.5.1 Poor integration of participation within the overall Reserve determination process

The project team seemed to put a lot of thought and planning into the technical side of the Reserve determination process but put much less into the approach taken to engaging stakeholders. The resulting approach rested on an assumption that stakeholders would be able to give inputs to the specialists in a manner that could simply be 'slotted into' the specialist's technical process.

There was poor planning and coordination of the actual process of sourcing stakeholders' inputs, and integrating these with those of other stakeholders, and specialists' contributions. In part this was due to poor integration and coordination of the project team and the various consultants' approaches. The various consultants and members of DWAF working on the project were most likely perceived by stakeholders as a single 'team' controlling the process. However, this 'team' seemed to have little shared understanding of policy interpretation, the purpose of the participatory process, the role of stakeholders, and the approach to facilitating their participation in decision-making.

This lack of shared understanding was reflected in poor coordination of team members' presentations and actions within and across meetings, and poor integration of the team's overall purpose within a single meeting. This most likely resulted in mixed or unclear messages or at best poor information transfer to confused participants. Mixed messages were potentially created with regard to: the purpose of participation, stakeholders' role, the degree of influence of stakeholders over decisions, the intentions of new water policy, and the purpose of the Ecological Reserve. No facilitation of an overall capacity building experience and of a group decision-making process was possible in this environment, with different presenters all leading the process in different directions.

There was also inconsistent attention paid to the quality and format of written communication with stakeholders outside of meeting events. Written material provided to stakeholders was often in very technical and formal language (e.g. slides presented at the first meeting; letter to stakeholders, 8 March 1999), though at other times it was evident that they had paid attention to the issue of putting information into a format accessible to stakeholders (e.g. the Information Pamphlet; the workbook for the DFS workshop).

In addition, little attention was paid to the process of creating and managing stakeholder expectations for what the process could deliver. This could have led to fatigue, frustration and ultimately disillusionment due to unrealistically high, or low, expectations on stakeholders' behalf.

7.5.2 Technocratic approach

The decision 'problem' – which was essentially about a DFS (but also the PES as a starting point for this) – was framed in predominantly technical (ecological and hydrological) terms, by means of both written and verbal presentations made by various member of the project team. The DFS was primarily described from an ecological perspective, while social and economic criteria were neglected and their discussion constrained by an agenda focused on 'ecological' concerns.

In keeping with this perspective, technical language and terminology was used in written and verbal communication, making documents and presentations relatively inaccessible to the majority of stakeholders, and effectively discriminating against those with poor technical capacity.

Capacity building focused on technical concepts and processes

There were a number of positive attempts at extra capacity building within the overall participatory process (e.g. additional workshops in the regions, and an extra preparatory day for those desiring additional training before the Pre-confirmation meeting). However these capacity building efforts were focused on transmitting technical knowledge and skills. This emphasis essentially reflected a desire to educate stakeholders to be able to understand specialists, with no reciprocal process being undertaken to enable specialists to understand stakeholders' perspectives of their resource needs and problems. Thus, the onus was placed on stakeholders to make the translation between the technical issues discussed, and their issues and experiences, i.e. to understand ecological and hydrological variables in the context of their lives and livelihoods.

Privileging a specialist view

As argued by Rhoads *et al.* (1999 p. 298), the participatory process "often fails if it adopts a coercive stance in which one type of knowledge or valuation is intrinsically privileged relative to others at the outset of the management process." Participation of stakeholders in decision-making for the Olifants Reserve was essentially interpreted as 'consultation' about a decision that had already been made by specialists. The PES and DFS processes were introduced from the specialists' perspective first, and the PES and EMCs were first developed by the

consultant, and then presented to stakeholders for comment, before stakeholders had been given the opportunity to express their views on the current or future state of their water resource. As proposed by the World Bank (1996 p. 134): "In most instances, fully developed proposals are really "take-it-or-leave-it" propositions, no matter how much lip service is paid afterward to collaborative decision-making."

From the attention that was paid to explaining technical concepts and terms it is evident that the challenge of building an interface between specialist consultants and non-specialist stakeholders was recognised. However the chosen approach to deal with this challenge was to teach stakeholders to contribute the information that the specialists wanted, on specialists' own terms, in their language, and within their frame of reference – thereby effectively disempowering the majority of stakeholders.

7.5.3 Product-oriented approach

As with the Inkomati CMA proposal process, participation was focused on a product required by the Act – in this case the Ecological Reserve. A separate participatory process, with a different set of representatives, was being conducted to prepare a proposal for CMA establishment, at the same time. Some participants expressed confusion as to the different roles of these two processes (e.g. minutes, 11 August 1998) and what links existed between the Reserve and CMA processes.

This focus on producing a specific statutory product resulted in a narrow interpretation of the purpose of the participatory process, and with this a narrow agenda focusing on the specific parameters of this decision.

<u>Narrow agenda and marginalisation of off-agenda issues</u>

Though participants were usually allowed to raise and briefly discuss other issues, the facilitator still kept the focus on a technical process and agenda. Allocation and domestic consumption issues were marginalised. However, when a workshop format was used in the Capacity Building meetings, this did seem to reflect an attempt to build an understanding of the greater context of WRM and policy, by introducing the discussion of CMAs and the broader principles and requirements of the NWA.

In general, the agenda and purpose of the process favoured the interests of current resource users. For example, only current resource users, who either abstract water from, or discharge waste into, the system, were able to see the impact of the IFR on their livelihoods. The impact on other goods and services, and the implications for new allocations for abstractive use, were not explained by the consultant team for their proposed IFRs.

Minimal interaction between stakeholders

The use of a workshop format, with small discussion groups, in the second meeting and capacity building workshops, and the small group size of all meetings, is likely to have encouraged inter-sectoral interaction, and learning about the perspectives of others. However, the overall participation process did not place a priority on relationships, and allowing, encouraging or facilitating interaction between stakeholders. The meeting to develop a shared vision for a Desired Future State ironically involved very little stakeholder interaction, or learning about others' needs, perceptions or preferences.

The ultimate decision-making process was not based on interaction within the group, but on the team extracting information from individual sectors. The majority of interaction thus took place between stakeholders and the project team, and not between different stakeholder sectors.

7.5.4 Inappropriate and rigid approach to decision-making

The approach to sourcing issues and preferences was technically-biased, and product-oriented. As mentioned earlier, the capacity building process appeared to be geared toward educating stakeholders to be able to contribute information for the DFS process in the format in which specialists wanted it. However, attempts at sourcing these views ultimately were unsuccessful, as the majority of stakeholders could not and did not contribute relevant information to the DFS process, resulting ultimately in inequitable participation as some were technically capacitated and could contribute, whereas others were not and could not.

Assumption of fixed stakeholder preferences

The approach to sourcing and combining stakeholders' preferences illustrated the team's unstated assumption that preferences are fixed, and cannot, or should not, be changed. Use of quantitative questionnaires to gauge preferences, and a lack of emphasis on stakeholder interaction in the DFS workshop in particular, illustrated this assumption. Stakeholder interaction and relationships are not relevant to the process of determining fixed individual preferences.

The assumption that preferences would not change carried through to an assumption that the only means of integrating stakeholders' different views, to deliver a group perspective, was to 'average' preferences and thereby hopefully reach acceptable compromise decisions. No attempt was made to discuss and thereby integrate stakeholder needs and values. This approach to decision-making rested on the dangerous assumption that one can reach an acceptable (and purposeful) trade-off by averaging (often only two) people's quantitative evaluations of their own preferences.

7.5.5 Interpretation of policy concepts

Documentation of presentations and comments made by the project team reflects an inconsistent portrayal of policy concepts such as the Reserve. The purpose of the Ecological Reserve in sustaining human resource use was not adequately conveyed, and even contradicted at times. For example, presentations on the proposed DFS process at the three Capacity Building workshops stated that: "The stakeholders will be required to inform the ecological consultants what they require of the river and, hopefully, this will coincide with the ecological requirements" (minutes, 14 August 1998). The project team unwittingly set up a conflict between 'Ecology' and 'people', through their presentations, and some of the idle comments made. For example, one of the consultants explained the need for stakeholders to carefully consider the implications of the Reserve by saying "more water for the Reserve means less water in your stomach" (pers. obs., pre-confirmation workshop, 23 November 2000). Statements like these were insensitive to the potential for reinforcing perceptions of conservation as a source of dispossession and exclusion for previously disadvantaged stakeholders.

Focus on water, not ecosystem goods and services

Though some members of the ecological team gave presentations using the concept of ecosystem 'goods and services', and though the DFS questionnaire tried to assign values to a variety of these, in general, the language used by the management team, and the engineer in particular, referred consistently to 'water' as the resource, and how much water people wanted or needed, or how much water could be lost to the ecology. Another instance of the focus on water was the DFS questionnaire, which distinguished 'beneficial use' from other goods and services, where beneficial use referred to abstractive water use (DFS minutes, 3 May 2000).

7.5.6 The challenge of representation and the large geographical scale of the WMA

The extent to which nominated representatives could fulfil their intended role in representing the interests of their sectors and regions was limited. Expectations of the scale of representation were unrealistic. Representation was designed to be mostly sectoral and not regional, yet regional inputs were required in the DFS workshop. The stated intention of representation was that those attending the process would both gather the views of, and take feedback to, their constituencies – thus making the assumption that a small group of stakeholders (numbering 40 to 50) have the capacity and resources to consult and inform an entire catchment. Representatives were also given little support to ensure that they delivered feedback to others; for example, the documentation used to provide feedback on the process was generally of poor quality and minimal accessibility to the average stakeholder.

7.5.7 The role of power imbalances in determining the outcome of the participatory process

The technical focus (including the technical nature of discussion, and the capacity required to understand documentation, and presentations at meetings) and exclusive use of the English language (other than separate capacity building exercises where interpretation was provided) marginalised previously disadvantaged stakeholders within the process. Discussion at all of the meetings held throughout the process was dominated by representatives from industry, mining and commercial agriculture.

7.6 Conclusion: Lessons from the Olifants Reserve determination process

The Olifants Reserve process illustrated a number of positive process elements:

- To a limited extent, the process was open to change in response to reflection on progress; for example, the change to use of a workshop format at the second meeting; the introduction of additional capacity building exercises, prior to the PES and pre-confirmation meetings; use of discussion groups to elicit more active participation.
- There was some recognition of the work of the Olifants River Forum. This recognition was in direct contrast to the Inkomati CMA proposal process, which alienated the Sabie River Working Group to some extent, causing them to cease their activities until the establishment of the CMA.
- Though the almost exclusive focus on technical capacity building was problematic, these technical capacity building efforts were impressive, and where these were successful created more transparency of the technical decisions reached than would have been possible with a 'dumbed-down' approach.
- The use of reviewers provided greater accountability of the project team and enabled the transfer of learning to future processes. However the reviewers were appointed with the intention of being able to critique technical aspects of the specialists' recommendations and the technical process. The inclusion of a suitably qualified reviewer to address the participatory aspects of the process would also have been appropriate.

From these, and the procedural influences discussed in the previous section, the following lessons can be learned:

*The importance of **planning and coordination** of the overall participatory and decision-making process:*

- The project team, even and especially if this involves a number of separate teams and consultancies, must develop a **shared purpose and understanding of the participatory approach** and integrate their efforts to achieve the overall process and outcome goals and to avoid creating confusion or mixed messages.

*The importance of the role of **facilitator**:*

- There is a need for **skilled facilitation** of the participation of stakeholders, to build both context and vision, skilfully draw out stakeholders' contributions, and to enable stakeholders to interact with each other and develop a shared understanding of each other's needs and values, and ultimately agree on a **shared vision** for the future of their resource.
- The role of facilitator should not just be secondary or incidental to another professional role played by a member of the project team.

*The need to pay attention to all aspects of **inclusivity**:*

- Ensure the **appropriateness of all communication**. For example, one cannot use phrases such as 'sense of place', or 'fed into a spreadsheet' and assume that all participants will understand what is meant by these terms. Even where technical terms are not used, interpretation into languages other than English may be necessary.

*The value of a **holistic** view of water resources:*

- The new water policy and law recognise that the entire aquatic **ecosystem is the resource**, and not only the water that it contains. Use of the concept of ecosystem 'goods and services' to describe the value of, and needs for, a particular ecological state of the water resource, can avoid the problem of setting up of a default conflict between the 'Reserve' and 'people'.

*Focus on **stakeholders' inputs, needs and values**, not specialists' knowledge, needs and values:*

- Stakeholders should express their needs and values in their terms, not those of specialists. An initial focus on needs and values from stakeholders' perspectives will give relevance to ecological or hydrological variables, when these do need to be presented and discussed.
- Specialist-derived *fait accompli* should not be presented to stakeholders for their approval. This will only alienate stakeholders and marginalise their issues.

*The importance of a strategy for achieving and supporting **accountable representation**:*

- Representatives need structured assistance, and most likely also resources, to be able to communicate information to and from their constituents. A process that truly seeks the input of local resource users will need to be conducted at the **appropriate spatial scale**, and ideally feed into WMA level processes through a hierarchical system of representation.

In summary, the Olifants case study demonstrated the overriding influence of a **technocratic** and **product-oriented** approach to facilitating stakeholder participation in a **distributive, value-based decision**. The assumption of **fixed stakeholder preferences**, and the quantitative approach to integrating these, limited the considerable potential of participatory

processes for inter-sectoral interaction and learning, and the discovery and development of common goals.

The Olifants Reserve determination process highlighted the challenges of achieving meaningful interaction between specialists and stakeholders in participatory processes, and the dangers of implicitly or explicitly privileging a specialist view in the decision-making process, thereby allowing only 'token' participation by stakeholders, and low ownership of the resulting decision. On the whole, the approach reflected the technocratic model of natural resource management described by Wondolleck and Yaffee (2000 p. 13) as "Tell us your concerns, and we will figure out a solution". In addition, new policy and paradigms did not appear to have been internalised by some of the consultants working on the project team, thus promoting misperceptions of the Reserve and the purpose of the new water policy and law. The process thus represented a lost opportunity to develop understanding and 'buy-in' to the protection aspects of the new water policy, and could even have reinforced the perceptions of previously disadvantaged stakeholders of environmental protection as a source of exclusion and dispossession.

The premise upon which the design of the participatory process was based appeared to be that "the Reserve is really a specialist decision – the purpose of participation is thus to educate stakeholders into approving a specialist decision". In reality this premise played out in the form of 'token' participation, and most likely confused and disillusioned participants.

7.7 Conclusion: Case studies of 'current implementation' – characteristics of current approaches and priorities for public participation in implementation of the NWA

The participatory processes conducted for the two case studies, though procedurally quite different, shared certain common characteristics: a **narrow focus** on a particular product or set of decisions, a **technical orientation**, and **minimal stakeholder interaction**, resulting in relatively **shallow participation**, in which stakeholders had only a minor influence on the overall decision outcome.

The two case studies also demonstrated the following common elements, outcomes and assumptions:

Elements:

- Specialists design solutions; stakeholders comment on them.
- There is minimal interaction between stakeholders.
- There is a focus on technical processes, to achieve a technical product/decision.
- There is a focus on 'the present'.

Outcomes:

- Low sense of ownership of process and outcome.
- 'Shallow' participation, effectively only consultation.
- Little or no positive effect on relationships.

Assumptions:

- Preferences are fixed, and will not change through interaction or learning.
- "Specialists know best."
- Stakeholder interaction is not a priority or explicit goal of the process.

These similarities reflect the following characteristics of current approaches and priorities for implementation of the NWA:

- **Fragmentation** of the participatory process around the different statutory 'products' demanded by the Act.
- Few guidelines and prescriptions for implementation of the policy and law, particularly for participation, allowing for considerable **influence of the individual interpretations and styles** of different DWAF staff and specialist consultants.
- Though decentralised at a national level, implementation still has a **large-scale focus**, at the level of WMAs and through its focus on statutory institutions such as CMAs. There is an accompanying **neglect of informal, local scale processes** such as voluntary catchment forums.
- Achieving equity, through the **redress of past imbalances, is hindered** by the considerable protection the NWA offers for historic use, and by the considerable delays inherent in implementing the protection aspects of the law.

In the following chapter, the experiences of these case studies, and the perspectives expressed by stakeholders, government and specialists (Chapter 5), along with a review of the relevant literature, will be used to develop a model linking 'process' and 'outcome'.

CHAPTER 8:

CONTRASTING APPROACHES TO PARTICIPATORY DECISION-MAKING

8.1 Introduction

The second objective of this research was to consider alternative approaches which could be used to implement 'public participation', and from these to address the third objective of this research – i.e. to suggest and develop principles and guidelines for a successful approach.

The approach taken to address this second objective will be to present the variety of perspectives and options on how to conduct participation (gathered from case studies, workshops, meetings, interviews and the literature), in a structured way, in the form of a model.

The model presented in this chapter aims to classify elements of participatory approaches and predict their outcomes, relative to the outcomes chosen as most relevant to this research (refer to Section 2.11). The model is structured to emphasise the most important process elements that have been found in this study to influence outcomes, e.g:

- The nature of stakeholder versus specialist inputs to the decision-making process.
- The scope of the process, expressed in the form of agendas for discussion.
- The role of discussion in decision-making, and the level and direction of interaction between stakeholders and other role-players.

This model was derived both inductively (as it draws directly on the processes and outcomes observed in the case studies and the perspectives expressed by role-players in South African WRM) and deductively (as it draws on literature offering confirming evidence, opinions and explanations for the processes and outcomes observed). The initial inspiration for the model was in fact the contrast offered by a reading of Costanza and Folke's (1997) portrayal of the 'coevolution of preferences', as a preferred group decision-making process, with the recent experience of the technically sophisticated yet relatively unsuccessful decision-making process for the Olifants Reserve. This provided the starting point around which other experiences and literature were gathered.

The model is presented as a contrast between two approaches. However this is not intended to imply that elements of either side are necessarily mutually exclusive. The two approaches should be viewed not as a dichotomy but as the ends of a spectrum. However, this is different from the spectra presented in the Theoretical Framework (Section 2.5) in that:

- It distinguishes process and outcome explicitly.
- It reflects experience of, and is based on impressions of, the alternatives apparent, and/or available, to South African implementers and practitioners at this time. (This was informed by the views and actual process intentions expressed by government and specialists in this study.)
- It focuses on two particular themes: (1) the role and importance of stakeholders in the overall decision-making process; (2) approaches to dealing with 'differences' in stakeholder (and specialist) perspectives and preferences.

8.2 Contrasting elements and approaches

The approaches have been labelled to reflect both of the themes presented above. Views on stakeholders' role and importance, and the probability and desirability of integrating their different preferences, combine to create an orientation or set of priorities that is either 'stakeholder-centred' or 'specialist-centred'. The elements of these two approaches are contrasted in Table 8.1.

Table 8.1: Contrasting elements of a 'specialist-centred' versus 'stakeholder-centred' approach to participatory decision-making

Specialist-centred	**Stakeholder-centred**
Timing and duration of stakeholder involvement • Stakeholders only involved after technical team have reached a certain stage of progress. • Participants have opportunity to select scenarios.	**Timing and duration of stakeholder involvement** • Stakeholders involved throughout the entire process (and even outside of particular decision-making process). • Participants have opportunity to generate scenarios.
Product-oriented • Highly structured agenda, designed to meet legal or bureaucratic stipulations.	**Process-oriented** • (Open) agenda flexible enough to respond to stakeholders' needs, used to surface stakeholders' knowledge, perceptions, needs and values.

Passive involvement	**Active involvement**
• Participants have option to contribute. • Participants have opportunity to select scenarios.	• Contribution required from all participants. • Participants have opportunity to generate scenarios.
Focus on technical processes	**Focus on social processes**
• Sectors consulted separately. • Minimal discussion. • Gauge individual preferences, e.g. using questionnaires, checklists.	• Sectors consulted together. • Extensive, inclusive discussion. • Gauge group preferences, through, and after, discussion.
Focus on present, past	**Focus on future**
• Participants focus on the problems and needs of the present, and even the past.	• Participants' focus is directed toward the long-term future, and designing a shared vision for this.

As is apparent from the 'labels' assigned to the two approaches, the first, and central, element separating these approaches is the role and importance of stakeholders in the overall decision-making process. In a chiefly specialist-centred approach it is likely that stakeholder involvement only begins after a technical team (generally consisting of hydrologists, ecologists and engineers) has reached a certain stage of progress in defining and debating the issues at stake (Pretty, 1995; World Bank, 1996). Participants then have the opportunity to select from a range of scenarios that someone else has generated, or they may only be allowed to comment on these scenarios after which specialists or managers make a decision as to which is best, tempering their starting opinions with the views of those consulted, or even rejecting these views altogether.

Alternatively, stakeholders are involved right from the start. This early involvement gives them the opportunity to contribute to framing and prioritising the issues for debate. Everyone is then involved in providing the contextual framework within which any decision or policy will later be made. This context has considerable power in itself, as it determines which (and therefore also whose) issues and priorities will be privileged or excluded in the ensuing negotiation process (Holmes and Scoones, 2000). Usually different role-players have different perceptions of what is a 'problem' and what would constitute 'improvement' (Pretty, 1995). Where participants are not permitted to contribute to the process of 'problem definition' (Little, 1994) this also constrains their contribution to 'problem solution' because often the 'solution' is implicit in the definition of the 'problem' (Zazueta, 1995).

From the experiences of the case studies presented in this thesis, it is apparent that participatory approaches may be oriented around either 'products' or 'processes'. Product-oriented approaches tend to use highly structured, inflexible agendas, designed with a predetermined end-point in mind. This is usually an attempt to ensure a consultation process produces the specific contents required within a final report, strategy or proposal. The relevance of stakeholders' issues and contributions is then determined by whoever sets this agenda, which in turn controls what may or may not be discussed (Holmes and Scoones, 2000) and what is ultimately documented in written reports of the outcomes and outputs of the process. For example, an agenda written to directly deliver the contents specified by the Water Act as required within a proposal for a Catchment Management Agency may easily marginalise or exclude the issues and concerns of most importance and relevance to the majority of stakeholders, especially if these lie outside the direct realm of institutional structure and function.

By contrast, a more process-oriented approach employs open and flexible agendas, which have broader, process goals in mind, and are used to surface participants' knowledge, perceptions, needs and values. In this way everyone is involved in building a shared context and purpose for their participation, including the interrelated social, economic and ecological issues at stake. The relevance of their contributions is then determined by the participants themselves, not as individuals but as a peer group (Renn *et al.*, 1995b).

In a chiefly specialist-centred process, the involvement of stakeholders tends to be passive, as usually they have the option to contribute but are not required to do so. Only those whose interest, concerns, and often technical understanding coincide with the agenda, and who share the organising authority's view of 'the problem' are likely to have anything 'relevant' to say. This generally means that a few confident and articulate people 'participate' (Thomas, 1995; Kaner *et al.*, 1996) and the rest attend meeting after meeting without ever giving their inputs or voicing their concerns. Alternatively, a stakeholder-centred process can use facilitation techniques, meeting formats/structures, and capacity building efforts, to secure the active involvement of all participants (World Bank, 1996).

In Table 8.1 a contrast is also drawn between 'technical' and 'social' emphases. A participatory approach can emphasise either 'technical' (quantitative modelling exercises or decision support systems; expert prediction or opinion) or 'social' (qualitative discussion, debate or negotiation) processes. Where there is a technical focus (e.g. the problem and solution is perceived simply as the optimisation of financial returns on water allocations), often sectors are consulted separately – their interaction is not required and it is easier not to risk the conflict (and potential delay) involved in bringing them together (Thomas, 1995). There is minimal discussion, and any dialogue that does take place is usually between the participants and the technical team. The facilitator or technical team then tries to gauge the preferences of each individual sector, that is, they try to find out what each sector would like for themselves. Often, this involves using questionnaires or checklists, drawn up by the technical team based on their perception of the appropriate end-product that is required. Even if sectors are consulted together there is little requirement for interaction or discussion (Costanza and Folke,

1997). There may need to be an extensive period of 'training' to enable participants to give the technical team inputs in a format consistent with the 'problem' and with the computational tools with which they plan to make a decision.

Conversely, a more 'stakeholder-centred' approach requires a focus on social processes (Rhoads *et al.*, 1999). Stakeholder interaction is a key and explicit aim of the process (Wondolleck and Yaffee, 2000). It is vital that sectors are consulted together, and that there is extensive and inclusive discussion. The facilitator or technical team can then gauge the preferences of the group, that is, they try to find out what the group as a whole wants, now that they have heard and discussed each other's needs (Costanza and Folke, 1997).

Finally, there is the option for participatory processes to focus on issues of the present, or even the past. Alternatively processes can be directed to focus on the long-term future. Discussions of the present often get caught up in discussing current conflicts, or trying to apportion blame for the problems of the past (Rogers, pers. comm.). Conversely, the future offers more neutral ground, and looking to the future is a powerful means to finding common ground, necessary for consensus and cooperation. Thinking about the future enables people to think beyond their present constraints and differences, allowing them to articulate their ultimate goals and values. This broadened thinking offers a new perspective on current conflicts and priorities (Rogers, pers. comm.), and the opportunity for diverse groups to discover shared long-term goals (Yaffee, 1998).

In summary, what I have termed a 'specialist-centred' approach to public participation has a tendency to be specialist-driven with minimal or at least highly passive stakeholder involvement (i.e. participants contribute only in objection to proposals developed and presented by specialists). The overall process is product-oriented, and there is a focus on technical processes and solutions. By contrast, a 'stakeholder-centred' approach prioritises stakeholder needs and values in designing the context, process and product of participation. The overall approach is process-oriented, and demands active stakeholder involvement. There is a focus on social processes, and designing a shared future.

8.3 Underlying processes and assumptions of alternative approaches

A central, though not necessarily explicit, assumption running through the features grouped as the 'specialist-centred' extreme is that people's preferences or demands, and their perceptions about issues, are fixed – they can not, will not, or should not change in the process of decision-making. This is a premise founded in the principles of conventional economic valuation, and is based on a social decision-making rule commonly referred to as 'consumer sovereignty' (Costanza and Folke, 1997). Under this premise attempts to alter preferences are futile – and may even be considered undemocratic. This is the view of much contemporary liberal theory – the role of political authorities is then simply to "aggregate individual preferences" (Smith and Wales, 1999 p. 299).

Though 'specialist-centred' processes may not explicitly subscribe to these theories, the emphasis on the specialists' role as integrator and judge of stakeholder preferences may potentially be motivated by similar scepticism about the nature of public opinion and action. Processes I have termed 'specialist-centred' in Table 8.1 often make the assumption of fixed preferences, when they consult sectors separately so that they cannot influence each other, or when they get people to express their needs or demands in private or anonymous formats. Use of this approach can also be driven by a motive of protecting minority or marginalised interests. Interest groups are consulted separately in order to protect them from having their inputs subordinated to those of more powerful or influential sectors. This motive can also be used to justify the use of expert opinion as a neutral, objective decision-making process. The assumption is then that specialists, as objective rational scientists, can optimise multiple objectives, in the interests of the greater or common good (Wondolleck and Yaffee, 2000).

If people's conflicting preferences truly are fixed, then consensual resolution is impossible, and a compromise solution is the only option. The fastest and seemingly fairest way to reach such a compromise is by a technical process, for example, some kind of 'decision support system' that uses questionnaire results, various weightings etc. to produce an average (Pretty, 1995) of what everybody wants. This approach is based on the assumption that it is possible for an 'objective' technical process to produce an optimal, equitable solution that is then acceptable to all concerned, as no one single preference or interest group has been favoured.

An alternate assumption is that people's preferences and perceptions can and do change when they are exposed to the experiences and viewpoints of others (Costanza and Folke, 1997; Smith and Wales, 1999). Where people have initially conflicting demands, reaching a shared, consensual decision is really only possible if participants' preferences are able to converge. Robert Costanza and Carl Folke (1997) refer to this process as the 'coevolution of preferences'.

This coevolution takes place by a process of 'shared value formation'. Participants learn together about each other's needs, values and experiences, and are then able to develop a common understanding of their shared context and problem, before developing a shared solution. People are able to change their demands out of a motivation not just to help others meet their needs, but because their perceptions and understanding of the issues have changed (Landman, 2000). For example, upstream users may change their demands and behaviour once they are able to fully understand the impacts, or potential impacts, of their activities on downstream sectors, as seen through the eyes of these other stakeholders. In the workshops used in this study, participants stressed the value of the opportunity these meetings gave them to learn about others' experiences and challenges. As Allen *et al.* (1998 p. 58) point out: "Much of the apparent conflict surrounding many resource management issues relates to the fact that different interest groups fail to appreciate the perspectives and values inherent in the actions of others".

However, consensual approaches to negotiation and cooperation do not rest on an assumption of any altruistic motivation of stakeholder actions (Yaffee, 1998). The process relies on people recognising their interdependence. "When individuals or groups must depend on support from others before they can take the action they want, they must satisfy the needs of those other parties to achieve their own goals" (Susskind and Cruikshank, 1987 p. 238). Phrased somewhat differently: the only way to make sure that they get what they want or need is to first find ways to help others get what they need (Calero and Oskam, 1983; Rogers and Bestbier, 1997). The ability to design all-gain solutions depends on participants' abilities to find a way to satisfy their own needs while ensuring the needs of other stakeholders are also met (Susskind and Cruikshank, 1987).

Another key process distinguishing the approaches described in Table 1, and which is likely to have a significant effect on the outcome of a participatory process, is the direction of interaction and communication that takes place. Where there is a focus on 'technical' processes, or on the specialists' opinions, knowledge and priorities, what happens most is that the stakeholders talk to the technical team, and vice versa. Relationships between stakeholders then become irrelevant, from the perspective of both the technical team and the participating stakeholders. From a stakeholder perspective the only influence that must be exerted is on the specialists, as they hold the power to decide on the distribution of benefits from a decision (Wondolleck and Yaffee, 2000). Interaction between stakeholders will be with the purpose of reducing the influence of the other on this perceived authority, thus they may try to counter one another's arguments or preferences, leading to confrontational interaction, and impaired relationships (Susskind and Cruikshank, 1987).

With a focus on social processes, and where some of the decision-making responsibility lies with the group as a whole, the stakeholders spend most of their time talking to, and attempting to influence, each other. Relationships are critical. They start to affect the demands that people make on each other, and, ultimately, on their shared resource. Extensive interaction and discussion between participants has the effect of giving a human face to sectors that are easily demonised in the abstract (Yaffee, 1998) thus allowing participants' behaviour to become more responsive to social norms. More often it is social norms, rather than confrontational appeals to legal or constitutional rights, that "set the rules for cooperation by setting expectations for justice and equity in relationships" (Brunson, 1998 p. 71).

The key assumptions and inherent processes contributing to the likely outcomes of the two hypothetical approaches are summarised below (Table 8.2).

Table 8.2: Assumptions and inherent processes contributing to the likely outcomes of a 'specialist-centred' versus 'stakeholder-centred' approach to participatory decision making

Specialist-centred	**Stakeholder-centred**
• Assumption that preferences are fixed.	• Assumption that preferences can change.
• Possible for an objective 'technical' process to produce an optimal, equitable and acceptable solution.	• Possible for a 'social' process to enable participants to 'coevolve' their preferences toward a shared solution.
• Stakeholders mostly talk to the technical team.	• Stakeholders mostly talk to each other.
• Relationships are irrelevant.	• Relationships are critical.

8.4 Likely outcomes of 'specialist-centred' and 'stakeholder-centred' approaches

The likely outcomes of the two contrasting approaches are presented in Table 8.3. A participatory approach that employs the set of elements presented as the 'specialist-centred' extreme is destined to deliver a decision that is in essence a compromise. The 'stakeholder-centred' alternative is more likely to deliver consensus.

Any decision reached through averaging individual preferences, or attempting to optimise them by the work of an external agent can only be perceived as a compromise by those who had no creative involvement in the process of designing a solution or decision. However, when people have undergone an extensive process of facilitated negotiation there is a possibility that they may reach a shared, mutually acceptable solution (Kaner *et al.*, 1996).

Compromise is often seen as a positive outcome of a negotiation process, particularly where conflict is high, and deadlock likely. However a compromise is fundamentally an unfavourable outcome and process, because it is designed to create an equal distribution of unhappiness about a decision. A compromise is a 'lose-lose' outcome, reached by splitting the difference between people's conflicting demands (Susskind and Cruikshank, 1987). Any technical process involving 'averaging' (for example, of survey results) is already in the realm of compromise negotiation. A consensus, on the other hand, is a far more creative process and solution, in which everyone becomes engaged in a search for mutual benefits (Susskind and Cruikshank, 1987). Reaching consensus requires a thorough analysis and exploration of the issues and options involved, and this may even involve conflict in its initial stages (Holmes and Scoones, 2000), provided that this conflict is aimed at reaching understanding and does

not impair relationships (Dorcey, 1991). This recommendation is in keeping with the argument presented in Section 2.8 that the merits of consensual approaches lie in their process, more than the apparent attainment of consensual agreement on a product.

As explained in the previous section, reaching a compromise involves confrontational interaction between participants, who compete to get the midpoint closer to their aspirations, often viewing each other as the problem (Rogers and Bestbier, 1997). Demands may often become extravagant or irrational, through a process of escalation. This principle of social psychology is well documented in the history of multi-party negotiation (Susskind and Cruikshank, 1987). By contrast, consensual processes depend on cooperation – seeking to understand others' needs and values in order to be able to find all-gain solutions.

Because the processes described as 'stakeholder-centred' require everyone to be directly and actively involved in developing a shared solution, to a shared problem, a sense of ownership results (World Bank, 1996), with a resulting willingness to cooperate in implementation. Conversely, compromises often inspire disinvestment from the process and product of negotiation (Susskind and Cruikshank, 1987). Often some or all of the negotiating parties develop the perception that they have been asked to give up the most in a compromise agreement, and will then seek to undermine its implementation. For this reason, compromise solutions often break down in the longer term (Susskind and Cruikshank, 1987).

As explained earlier, reaching a compromise often involves confrontation; therefore relationships between participants are usually impaired. Conversely, the cooperative nature of consensual processes builds and improves inter-sectoral relationships. Building relationships takes time (Thomas, 1995), thus the efficiency of the consensual process may seem low in the short-term (Susskind and Cruikshank, 1987). However, these relationships form the foundation and sustainability of all future cooperation, resulting in a higher overall efficiency of the ongoing participatory management process. Compromises may be faster to work out than consensus solutions, but the conflict they create lingers to sabotage future processes and decisions.

Table 8.3: Likely outcomes of a 'specialist-centred' versus 'stakeholder-centred' approach to participatory decision-making

Specialist-centred	**Stakeholder-centred**
• Compromise • Reached by confrontation.	• Consensus. • Reached by co-operation.
• Alienation – Disinvestment.	• Ownership – Buy-in

• Relationships impaired.	• Relationships improved.
• Short-term efficiency high. • Overall efficiency low.	• Short-term efficiency low. • Overall efficiency high.
• Consultation	• Participation – empowerment

8.5 Conclusion: A preferred approach to participatory decision-making

The model presented in this chapter proposes that approaches to participatory decision-making employing elements such as passive and short-term stakeholder involvement, product-oriented agendas, and separate consultation of, or minimal discussion between, stakeholders, are operating under the assumption that stakeholder preferences are fixed, and that it is possible for an objective, technical process to successfully aggregate these. Conversely, more **'stakeholder-centred'** approaches, which use **active** and **ongoing** stakeholder involvement, **process-oriented**, **flexible agendas**, and extensive **interaction** between participants, make the assumption that **preferences can change**, and that it is possible for a **'social' process** to enable participants to reach agreement on a shared decision. The outcomes of a 'specialist-centred' process are likely to be compromise, a low sense of ownership by participants of the process and decision, and impaired relationships, whereas 'stakeholder-centred' approaches result in **consensus**, a strong sense of **ownership**, and improved **relationships**.

Given that outcomes such as 'ownership', relationships and cooperation, consensus and efficiency are desired by the new water policy, and were thus part of the evaluation framework chosen for this study, a more 'stakeholder-centred' approach is proposed as appropriate to achieving successful implementation of the principles of the NWA.

In the next chapter, this model and the elements labelled as 'stakeholder-centred' are expanded upon, with the use of the relevant literature, to develop a set of principles and processes for managing and conducting participatory processes for IWRM. In addition, this discussion will examine constraints to implementing such an approach within the broader context of South African WRM at this time.

CHAPTER 9:

A SUGGESTED APPROACH TO MANAGING AND FACILITATING PUBLIC PARTICIPATION IN INTEGRATED WATER RESOURCE MANAGEMENT IN SOUTH AFRICA

9.1 Introduction

The aim of this research (Chapter 1, Section 1.3) was to explore, analyse and evaluate existing and potential approaches to participatory decision-making, in the context of South African WRM, and thereby ultimately recommend a preferred approach.

Achieving this aim rested on three objectives:

- An assessment of current implementation through two case studies.
- Consideration of alternative approaches and the likely outcomes of these.
- The proposal of guiding principles for a successful participatory process, and the examination of the factors that facilitate or constrain the implementation of these.

This chapter will focus on this third objective, while building on the insights gained through achievement of the first and second objectives, and reported on in the preceding chapters.

The exploratory purpose and approach employed in this research, along with its broad focus, resulted in 'patchy' evidence and conclusions relative to the more detailed objectives of this study (including the elements of the evaluation framework (Table 2.1) and the interview checklist (Table 4.1)). Objective 3, and particularly the first section of this chapter ('Principles and processes of successful participatory decision-making'), therefore draw more extensively (relative to other aspects of this thesis) on the literature. The experiences of this study were used to critically select and interpret this literature.

The chapter is divided into five parts:

- (1) A set of principles and processes for conducting successful participatory decision-making. This expands on the elements and processes identified in Chapter 8 as 'stakeholder-centred', using the experiences of this research, along with the literature found to support these experiences.

- (2) This suggested approach will then be viewed within the broader context of a participatory resource management/governance system, by examining the implementation of these principles and processes in the current context for South African WRM. Given that the case studies of current implementation used in this study illustrated an essentially 'specialist-centred' and 'product-oriented' approach, what factors are currently constraining the implementation of more 'stakeholder-centred', 'process-oriented' processes?
- (3) A strategy for facilitating the implementation of a more 'stakeholder-centred' and 'process-oriented' approach to participation, given the constraints identified in the section above, with particular attention to the issue of clarifying the role of participation within governance and democracy.
- (4) Some recommendations for dealing with some of the most serious challenges of the South African WRM context, i.e. addressing power imbalances, ensuring decision quality in addition to sustainability and equity, and achieving accountable representation. These also provide important focus areas for future research.
- (5) A conclusion to this chapter, and the thesis, in the form of a vision for the future of participatory WRM in South Africa.

9.2 Principles and processes of successful participatory decision-making: A process-oriented approach to reaching agreement in the face of differences

In Chapter 8, a preferred approach to participatory decision-making, in the form of a set of process elements, underlying assumptions and desired outcomes, was suggested. This 'stakeholder-centred' approach is proposed to be based on long-term, ongoing stakeholder involvement, social processes, and extensive interaction and discussion between participants, who ultimately reach agreement with each other, and not through deferring to the authority of government or specialists. These elements reflect an emphasis on a 'process', and not only a 'product'.

Various authors have advocated such a process-oriented approach to participation (Susskind and Cruikshank, 1987; Renn *et al.* 1995b; Kaner *et al.,* 1996; World Bank, 1996; Yaffee, 1998; Brunson, 1998; Holmes and Scoones, 2000; Landman, 2000; Wondolleck and Yaffee, 2000). One of the most comprehensive descriptions of the details of the overall process of making successful group decisions is the work of Kaner *et al*. (1996). Though this is directed at the context of decision-making within companies or other organisations, the processes of facilitating human interaction and action in groups are likely to be applicable across contexts. This discussion will therefore use Kaner's framework to structure and discuss a suggested process for participatory decision-making. However, this will also draw on the work of other authors (e.g. Susskind and Cruikshank, 1987; Thomas, 1995; Costanza and Folke, 1997; Yaffee, 1998; Holmes and Scoones, 2000), other disciplines (negotiation and conflict management, environmental economics, collaborative resource management), theorists

(Habermas) and theories (Communicative Rationality, hermeneutics), as well as the experiences of this research.

Kaner *et al.* (1996) advocate a stage-based process in which different principles and processes are applicable at different points in the overall group decision-making process. A facilitator is crucial to moving between these stages. This section will highlight various aspects of a 'process-based' approach as follows:

- The role of facilitator.
- Four sequential stages of group decision-making, and the specific principles and processes that apply to each stage.
    - Divergence
    - The Groan Zone
    - Convergence
    - Closure
- Overriding principles running through all of the stages and thus an overall approach.
    - The role of conflict
    - The role of relationships
    - The role of experts and expertise
- A summary of key principles and process for facilitating successful public participation in South African WRM.

9.2.1 The role of facilitator

Skilled facilitation is crucial to achieving successful participatory decision-making in the face of diverse needs, values, perspectives and preferences of stakeholder groups (Yaffee, 1998; Susskind and Cruikshank, 1997). "The role of the facilitator is to stimulate, organize, and synthesize the thinking of the group so that it can reach consensus" (Thomas, 1995 p. 118). Kaner *et al.* (1996 p. xi) define a facilitator as "content neutral" but a "process advocate". By "not taking sides or expressing or advocating a point of view" the facilitator can "advocate for fair, open, and inclusive procedures" that are able to balance participation and improve productivity. The facilitator is responsible for "establishing a safe psychological space" (Kaner *et al.*, p. x) in which all members of a group can participate fully.

Doyle, in the foreword to Kaner *et al.* (1996 p. vii), identifies the following qualities of a competent facilitator: "a deep belief in the wisdom and creativity of people; a search for synergy and overlapping goals; the ability to listen openly and actively; a working knowledge of group dynamics; a deep belief in the inherent power of groups and teams; a respect for individuals and their points of view; patience and a high tolerance for ambiguity to let a decision evolve and gel; strong interpersonal and collaborative problem-solving skills; an understanding of thinking processes; and a flexible versus a lock-step approach to resolving issues and making decisions."

Both the Inkomati and Olifants participatory processes suffered from a lack of such a sophisticated understanding of the role and value of skilled facilitation in successful group decision-making. Facilitation is particularly important to encourage groups to explore their differences productively – and to find common ground and consensus resolution in the face of these. This process proceeds best when the facilitator recognises the existence of a number of stages; these form the subject of the next section.

9.2.2 A stage-based participatory decision-making process

One of the most striking aspects of both the Inkomati and the Olifants case studies was their failure to treat 'public participation' as a *process*, which though iterative (and thus not entirely orderly and sequential) needed to pass through stages, and thereby to build the maturity of the group – their thinking, interaction and relationships – before a successful decision could be attempted.

For example, in the Inkomati CMA proposal process, an attempt was made to focus too early on a number of decisions (CMC composition, organisational structure and budget). Similarly, in the Olifants Reserve determination process the stakeholders (though the intention of the project team was that they would have been sufficiently prepared by the capacity building workshops) were not able to take part in the decision about a Desired Future State when it was presented to them.

Cole (1981 in Thomas, 1995) recognised the existence of a common developmental cycle in participatory processes – progressing through stages such as 'initial optimism', 'confrontation and deadlock', to 'accommodation' and 'productive decision-making'. Similarly, Kaner *et al.* (1996) propose that the process of participatory decision-making consists of four stages (Figure 9.1): gathering diverse points of view (divergence); building a shared framework of understanding (the 'groan zone'); developing inclusive solutions (convergence); and reaching closure.

The first stage is characterised by 'divergent thinking', whereas developing an inclusive solution and reaching closure involve 'convergent thinking'. The intermediate stage, in which divergence must change to convergence, is a time of 'struggle'. This process is marked by confusion and misunderstanding (Kaner *et al.*, 1996). However, if a group tries to 'short-circuit' this process, by reaching closure too early, before they have truly explored the diversity of perceptions within their ranks, no shared framework of understanding can be built, and participants are likely to develop only superficial (if any) agreement on a poorly informed decision.

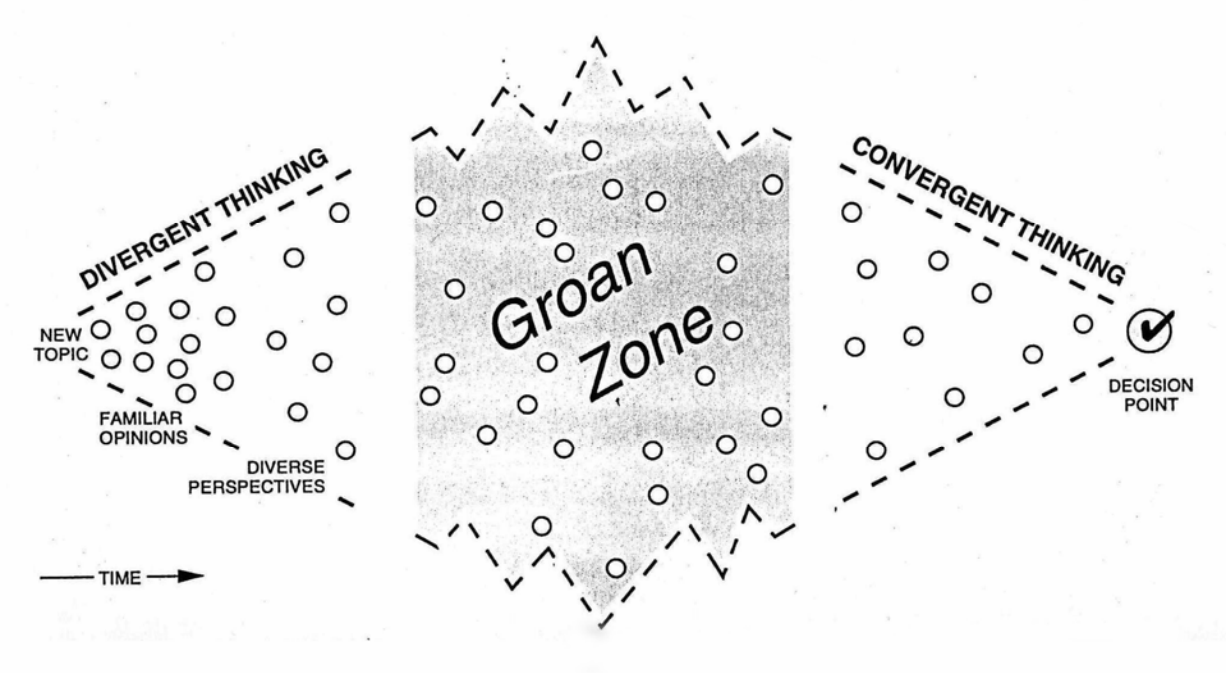

Figure 9.1: Kaner *et al.*'s 'diamond' of participatory decision-making, showing the four stages of 'divergence', the 'groan zone', 'convergence' and 'closure' (From Kaner *et al.*, 1996)

Divergence

Divergence is aimed at gathering diverse points of view, essentially a process of exposing the differences in participants' perspectives, knowledge, and experiences.

The motive for this divergent thinking is to build on diversity (Dorcey, 1991; Kaner *et al.*, 1996; Landman, 2000). Taking advantage of the full range of knowledge, skills, ideas and experience residing within a group, requires "*inviting* difference, not fearing it" (Kaner *et al.*, 1996 p. xiii). As Landman (2000 p. 10) suggests, in a discussion of the value of a hermeneutical or interpretive approach to water resource decision-making in South Africa, all the different perspectives that are expressed within a participatory process are "valid points of departure that reflect important aspects of the resolution to an issue". Instead of viewing the complexity and variety of participants' views as a problem, managers should instead welcome the tension created by the different approaches as a platform for mutual learning. This attitude does not only extend to people's views on a potential solution or decision in response to a particular decision 'problem'. Though people may come together to solve a shared 'problem', they often do not share the same perspective on, or definition of, the 'problem' itself (Pretty, 1995). These perspectives on the 'problem' will need to be explored before any shared resolution can be found.

At the divergent stage the role of the facilitator is to create the opportunity for everyone to express their view (Kaner *et al.*, 1996). Achieving this may require having 'rules of conduct' which enable all present to speak without interruption or criticism, as was used in the stakeholder research workshops and, to a lesser extent, the Inkomati CMA proposal process. The facilitator also determines the scope of contributions that is allowed, by setting the 'agenda' or posing the questions for discussion. At this initial stage of the process it is especially valuable to allow participants to express their 'burning issues'. As Kaner *et al.* (1996 p. 159) point out: participants in decision-making processes over contested issues usually arrive "with strong opinions and well-rehearsed arguments". If they do not get the chance to express their opinions fully, without being "interrupted or discounted, it is predictable that they will insert their positions into the discussion at every opportunity". However, when people are given the opportunity to communicate their positions to others fully, they become better able to listen to one another. This listening is a precursor to mutual understanding and mutual learning. Similarly Talbot (1983, p. 87-88) proposes the principle that "part of mediation means letting people express their anger and frustration" especially early in the process (while at the same time looking "continually for areas where they can agree"). This principle was confirmed by experiences in the first stakeholder workshop, in which the question 'why are we here?' elicited a variety of very serious problems and issues being faced by participants. Once these issues had been fully expressed and understood, and were seen to be captured in writing for all to see, people could move on to more focused discussion. Observation of the Inkomati Reference Group meetings demonstrated that those with strongly felt issues, not however considered by the agenda or facilitators to be relevant to the process of CMA establishment, raised them repeatedly throughout the process. Both case studies, and particularly the Olifants Reserve process, demonstrated an absence of a meaningful 'divergence' phase early in the process. For example, differences in stakeholders' perspectives and knowledge were not able to be exposed or accessed by the Desired Future State process, due to the inability of the majority of participants to express their needs and values within this forum, and within the technocratic framework provided for this decision.

However, as Pretty (1995 p. 1250) points out: "The challenge is not just that … differences have to be recognized, but that the competing values need to be mediated so as to produce agreements between actors with very different agendas." The often difficult and uncomfortable process of integrating participant's diverse perspectives is the focus of the next stage of participatory decision-making.

The 'groan' zone

The transition from divergent to convergent thinking is not an automatic one. People find it difficult to shift from expressing their own perspective to understanding the often widely differing perspectives of others. Many "get overloaded, or disoriented, or annoyed, or impatient. Some people feel misunderstood and keep repeating themselves. Others push for closure" (Kaner *et al.*, 1996 p. 14). The process of building a shared framework of understanding is marked by confusion, frustration, discomfort, ambiguity and conflict (Kaner

et al., 1996). People must struggle to understand others' positions and to "integrate new and different ways of thinking with their own" (p. 18).

The facilitator's goal, in this stage, is to support the group to develop a shared framework of understanding. Kaner *et* al. (1996) propose that mutual understanding is facilitated by two processes: building and strengthening relationships (through activities which allow people to get to know one another) and creating shared context (through generating shared experiences, language and information, thus enabling people to think from each other's perspective). Creating shared context was an explicit goal of the first stakeholder workshop and produced a succinct set of 'issues' which proved invaluable in understanding stakeholders' perspectives of the South African WRM process.

Kaner *et al.* emphasise that the aim is not necessarily to agree with another's perspective, but to understand it. This is a fundamental principle distinguishing the process of developing a shared frame of reference, in a consensus-based decision-making process, from the more common process of argument and debate. The latter essentially involves using Habermas' strategic rationality – aimed at 'winning', whereas the former involves the use of communicative rationality – aimed at 'understanding'. Kaner *et al.* (1996) refer to the former as 'persuasion': "the views of the 'other side' are dissected point by point for the purpose of refuting them. Little effort, if any, is put into discovering the deeper reasons people believe what they do. Even when it appears unlikely that persuasion will change anyone's mind, participants continue to press home their points … Most participants tend to stop listening to each other, except to prepare a rebuttal" (p. 26).

Conversely, achieving a shared framework of understanding requires listening to, and understanding, everyone's perspective. In the process people often gain insight into their own position, possibly discovering that their thinking is misinformed, or their assumptions incorrect (Landman, 2000). A similar process and distinction is drawn by those proposing a hermeneutical approach to decision-making in South African WRM. As expressed by Landman (2000 p. 11): "This process of identifying and articulating one's prejudices in a given situation and then attempting to understand the prejudices of another viewpoint… is an entirely different approach to attempting to convince another of one's own point of view". This is contrary to a simplistic view of 'rational debates' that are "structured around the mechanism of winning and convincing others that some viewpoints are more right than others" (Landman, 2000 p. 11). "The point is not to out argue the other party but to test each other's opinions". Achieving resolution requires that participants have a willingness to be changed by the perspectives of others. Without this willingness divergence can never lead to convergence.

Convergence

Inclusive solutions are decision outcomes that are able to meet the needs of all participants, and are therefore not compromises (Kaner *et al.*, 1996). Such solutions are possible because participants progressively become more able to integrate the needs and goals of others with

their own, as they learn more about others' perspectives. Such solutions are also possible if participants realise their need for cooperation, due to their interdependence (Susskind and Cruikshank, 1987) – it then becomes strategic for individuals to help others to get what they need, as a means to meeting their own goals (Calero and Oskam, 1983).

The process of developing inclusive solutions is what Costanza and Folke (1997) refer to as the "coevolution of preferences". The key to enabling this coevolution is a process of shared value formation through discussion. Coevolution of preferences requires that individual values are able to change in the process of decision-making. Smith and Wales (1999), in their review of the use of 'citizens juries' in a number of different countries, suggest that participants in these processes experience a change in attitude as a result of taking part in a process designed to reflect on their values and experiences, along with that of others. Empirical data support this claim: "jurors almost always change their minds during the sessions, as they become more involved with the issues" (Stewart *et al*., 1994 p. 25). In the UK (Coote and Lenaghan, 1997) "questionnaires before and after juries highlight changes in jurors' attitudes; and there is evidence that some jurors are more civically active long after the jury process has ended" (Smith and Wales, 1999 p. 303).

Studies have also shown that convergence and agreement are more likely in processes focused on the long-term future. Shared long-term goals enable participants to find common ground in the presence of currently conflicting perceptions and preferences. As Yaffee (1998) points out: "Sometimes to find shared goals, groups are forced to look for objectives above the current problem or conflict. Fostering cooperation by articulating such 'superordinate goals' is consistent with classic research on cooperation" (Sherif, 1958 in Yaffee, 1998). Similarly, Costanza and Folke (1997 p. 58), in proposing the likelihood of the coevolution of stakeholder preferences, highlight the role of "public discussions of the positive, long-term aspirations of the stakeholders" for their region.

This sentiment is echoed by the World Bank (1996 p. 135): "When all stakeholders collaborate in designing their collective future, it increases the chances of former differences being resolved and a new consensus emerging around issues everyone can agree on. This is probably so because people who have to live and work together can often find ways to agree if given the chance." Sceptics may doubt this possibility simply because this opportunity to foster cooperation is seldom used: "people do not often get the chance to work together to determine their collective future. Development projects prepared in the external expert stance do not provide that chance" (World Bank, 1996 p. 135). In evidence of this, neither of the case studies used in this research truly offered participants the opportunity to discuss or design their shared future. The Inkomati proposal process discussed the future institution (the CMA) but failed to discuss what this institution would do, or what outcomes the stakeholders desired this institution to strive toward. The Olifants Reserve determination process was mandated to discuss the future of the Olifants River, in the Desired Future State (DFS) process. However, this process was largely framed (and therefore limited) by the Present Ecological State (PES) findings. Though some specific, highly localised aspirations for the resource were expressed, the overall process did not make use of the potentially inspirational and cohesive qualities of a

shared 'vision-building' process: Firstly, as people could not express their aspirations in a format requested by the technical team, and secondly, because the integration of these preferences was limited to a mathematical – instead of integrative, deliberative and social - process. The vision-building exercise employed in the stakeholder workshops showed evidence of the potential benefits of such an approach.

Closure

Achieving closure or 'agreement' on a decision in a consensus-based decision-making process (Kaner *et al.*, 1996) does not necessarily call for unanimity – in which everyone must agree on all aspects of the decision, and all participants have an individual veto. 'Gradients of agreement' exist within groups and a decision can be made by the group at the start of a process to accept a certain level of agreement as adequate. Though no single participant will then have veto, individual voices still "wield significant influence – enough to ensure that the group will engage in a genuine process of thinking and feeling together" (Kaner *et al.*, 1996 p. 210).

Achieving buy-in to a decision, particularly among those who were represented in the process but did not themselves take part, requires attention to the principles of transparency and verifiability. Stirling and Maher (1999 p. 13) suggest that participatory processes and techniques should "allow for an 'audit trail' explicitly linking the results with the various inputs, assumptions and parameters adopted in the analysis". In this respect, the Olifants Reserve process's emphasis on the transparency of IFR determination, through teaching participants to understand the derivation of the IFRs and their potential impacts on future resource use, was commendable. However this transparency and understanding only extended to the stakeholders in attendance and is unlikely to have reached their constituents.

Smith and Wales (1999) suggest that a means to achieving wider buy-in and legitimacy for the outcomes of participatory decisions by representatives is 'publicity' – publicising both the decisions and recommendations achieved, along with the process by which these outcomes were reached, i.e. the reasons for the decisions made. Reports of proceedings should be written in a way that highlights these linkages, and thus gives the public access to the process by which values and beliefs held prior to the process have been transformed (Smith and Wales, 1999). The Inkomati CMA proposal process made some strides toward this, in that it produced lists of written comments received on each meeting presentation and proposal draft, and the responses of DWAF and the consultants to these, explaining how and why they were, or alternatively could not be, addressed.

9.2.3 Allowing space for conflict

Little overt conflict was displayed in either of the case study participatory processes – however, the expression of diverse stakeholder views was largely constrained by inflexible agendas, large group size, and limitations or imbalances of capacity and power.

As discussed in Chapter 2, the role of conflict and consensus are central debates within deliberative democratic theory. Conflict can be perceived negatively in negotiation processes. Others argue that "conflict is necessary to achieve collaboration, because it permits all concerns to be aired and ideally addressed" (Cortner and Moote, 1999 p. 63). Conflict is "often the only available tool for achieving badly needed reforms" and should not be suppressed (Susskind and Cruikshank, 1987 p. 34). In a truly inclusive process, participants should be able to introduce opposing ideas, needs and values without fear of derailing the process. In situations where conflicts are already apparent, these should "not be ignored in the vain hope that deliberative consensus will somehow emerge, but need to be addressed head on. Conflict negotiation and consensus building therefore need to be seen as two sides of the same coin" (Holmes and Scoones, 2000 p. 49).

The process should not, however, create conflict. "Incessant confrontation … is destructive" (Susskind and Cruikshank, 1987 p. 34). Achieving resolution requires that participants have a willingness to be changed by the perspectives of others (Landman, 2000). Confrontational and aggressive interactions between participants will only cause them to 'harden' or intensify their positions, and will impair the relationships on which future cooperation depends. Strategies are required to make disagreements within participatory processes productive (Dorcey, 1991), for example, having rules of conduct for participants' interactions, striving to find common ground, and exposing incentives to pursue agreement.

9.2.4 Building positive relationships

'Relationship-building' was used as an outcome in the evaluation framework developed for this study (Table 2.1) and applied to the case study participatory processes. Neither the Inkomati nor the Olifants processes emphasised relationship-building as an explicit goal of the process. Yet, the ongoing exposure to fellow resource users in these processes in itself appears to have achieved some positive inter-sectoral interaction, as attested to by Inkomati stakeholders in both this and Anderson's (2002) study.

Fisher and Brown (1988, p. 3) define successful participatory decision-making as producing both outcomes that are able to satisfy the interests of all participants, and "good feelings about how those outcomes were achieved." These "good feelings" depend on respectful interactions between participants. Similarly, Moore (1996), in a study of the outcomes of dispute resolution processes, identified 'the qualities of relationships' as an important common element of successful processes. Tuler and Webler (1999 p. 451) in reporting on the results of an interview study of participants in a forest planning process, conclude that "a good process

has to attend to the quality of relationships among participants. In particular, a present process should recreate social conditions that permit future processes to flourish." From the perspective of ongoing, voluntary cooperation, relationships are a key issue determining the sustainability of participation and cooperation over time. Relationships play a central role in building trust, which is an important element lowering the transaction cost of cooperation (Bromley, 1993; Pretty and Ward, 2001).

Attention to relationship-building within the process, and seeking relationships as an outcome, are thus fundamental principles of successful participation.

9.2.5 The role of experts and expertise, in participatory decision-making

The guidelines proposed by Kaner *et al.* (1996) were designed for application to organisations, in which it can be presumed that collectively the members of the group possess, by virtue of their different roles within the organisation, the relevant knowledge and skills required to make the decision in question. By contrast participatory processes to make decisions involving scientific knowledge and technical processes often involve stakeholders and public who do not have the relevant technical knowledge, and must therefore be advised or informed by those who do. The nature of this essential involvement of specialists in participatory WRM decision-making processes, and the consequent interaction between specialist and stakeholder, is a key challenge.

In particular, there is a danger that specialists or scientists "who often are convinced of the superiority of scientific knowledge", could attempt to "overtly wield this knowledge as a source of power in the clash of values" (Rhoads *et al*., 1999 p. 303). This stance "often leads to ineffective top-down intervention-oriented negotiation strategies in which the scientist attempts to formally educate the ignorant or wrong-minded non-scientist." This danger was highlighted by the case studies (particularly the Olifants DFS process) and perspectives expressed in this research – an alternative conceptualisation of the role of experts and expertise will be presented in Section 9.4.

9.2.6 Summary: Principles of facilitating process-oriented participatory decision-making processes

Based on the experiences of this research, and the most commonly echoed sentiments of the literature found to support these experiences, I propose the following as fundamental principles (central to the phased, process-oriented approach described above) for facilitating participatory decision-making processes in South African WRM:

Ensure skilled facilitation:

- It is vital that the facilitation of participatory processes is aimed at creating a platform for constructive dialogue and mutual learning. Managing inter-sectoral interaction

within workshops or meetings does not merely call for the fulfilment of a chairman's role. Skilled, proactive facilitation is crucial to ensuring a fair and inclusive process, and to guiding discussion in the direction of its overall aims within the greater management process. Facilitators must recognise that the process of reaching agreement involves different stages, and must be allowed to take its course, with the help of appropriate facilitation techniques.

Invite difference; ensure inclusive discussion:

- The participatory process must allow for the expression of diverse views. It is the facilitator's responsibility to ensure that discussion is inclusive. For example, the stakeholder workshops, held within the WRC project forming part of this research, employed the principle (supported by participants) that: all participants must be able to state their view without interruption or criticism, and contributions must be heard from all participants. (Use of interpreters may be necessary).

Do not suppress conflict, but keep interaction constructive:

- In processes dealing with controversial decisions, suppressing conflict will lead to a skirting of fundamental issues. However, conflict can damage relationships, and the facilitator needs to keep interaction and dialogue between participants constructive.

Encourage an atmosphere of trust and openness:

- Coevolution toward consensus can only take place in an atmosphere of trust and openness. The most challenging step in consensual negotiation processes is in overcoming the initial unwillingness of participants to 'lay all their cards on the table'. Making the first move toward cooperation may be seen as an admission of the weakness of one's starting position. This hesitance can only be overcome in a process that builds trust, and exposes the mutual benefits of cooperation. Highly structured, product-oriented agendas for discussion are not conducive to this gradual surfacing of aspirations and motivations. Susskind and Cruikshank (1987 p. 118) suggest an informal process of "inventing without committing" for the generation of creative, all-gain solutions.

Create a learning environment:

- The stated purpose of the process must be one of 'mutual learning', not 'education' or 'debate'. The goal is to understand others, not defeat them.

Focus on the future:

- Facilitation must be aimed at keeping participants' focus on the future. Thinking about the future enables people to articulate their ultimate goals and values, by allowing them to think beyond their present constraints and differences. The new perspective that this offers on current conflicts and priorities (Rogers, pers. comm.) creates opportunities for diverse groups to find common ground through the discovery of shared long-term goals.

Build relationships:

- Positive relationships between stakeholders, and between government/managers, specialists and stakeholders, are essential to the success of cooperative efforts. Improved inter-sectoral relationships are one of the most important 'process outcomes' which process-oriented approaches must seek to achieve.

The question remains however whether it is possible to implement these principles, and a 'stakeholder-centred', 'process-oriented' approach to participation, in South African WRM at this time. This, more conceptual, broad-scale issue will be addressed in the next two sections: the first examines the factors currently constraining successful implementation, and the second, how these constraints may potentially be overcome.

9.3 Factors driving the implementation of 'specialist-centred' and 'product-oriented' participatory processes in South African Water Resource Management

Assessment of the Inkomati CMA proposal process (Chapter 6) posed the following conclusions: an inequitable outcome, largely due to the concerns of the previously disadvantaged being found outside of the scope of the process, which focused on institutional aspects and thereby marginalised stakeholders with more resource-based concerns; the achievement of relatively 'shallow' participation, through the use of a public meeting format, and elements of a Decide-Announce-Defend approach. The Olifants Reserve process similarly achieved an outcome that demonstrated little influence by stakeholders, as few could contribute meaningfully to a highly technical and product-oriented process.

Given that the principles and processes described in Section 9.2 have been written about in a variety of studies and sources, and many were in the guidelines (Gőrgens *et al*. 1998; DWAF, 2000a; DWAF, 2001) produced by DWAF and the WRC, this begs the question: What is keeping the implementation of participatory processes for WRM in South Africa on the shallower, 'specialist-centred' and 'product-oriented' regions of the participatory spectrum?

Based on the experiences of case studies, meetings and interviews, it appears that several factors are playing a role: the fragmentation of participation around different statutory decisions; the focus on a WMA scale; the uncertainty resulting from the large degree and extent of policy change; attitudes among implementing agents toward participation and its role; and finally ambivalence in both the intent and process of implementing the Act's requirement for 'public participation'.

9.3.1 A fragmented participatory process

It is my opinion that the narrow, product-oriented focus of current implementation events is being encouraged by the present fragmentation of the participatory process around the specific

legal and technical products that the Water Act requires (Figure 9.2). Separate processes are currently taking place for each product for which participation must be shown to have taken place, for example, developing a proposal for the establishment of a Catchment Management Agency, the setting of the Reserve, and the development of a Catchment Management Strategy. This singular purpose of each participatory initiative dictates narrow agendas and tightly controlled participatory events, as evidenced by the two case studies of participation used in this research. The result of this on participating stakeholders appears to have been much confusion, participation fatigue, and, perhaps most seriously, a general perception that their contributions are only welcome where they fit into a highly specific agenda, set entirely by government or the technical team. Participants then fail to develop a shared understanding of the overall resource management context. Without this understanding, the different statutory products seem to stakeholders to be unrelated to their issues – their lives and livelihoods – and thus their interest in participating. In such a fragmented approach there is a tendency for participation to be passive, and for stakeholders to defer all responsibility (for achieving more equitable and sustainable resource use) to government. In addition, there is little or no recognition of the role of the participatory process in building relationships, or the existence of a greater context and purpose underlying specific consultation events.

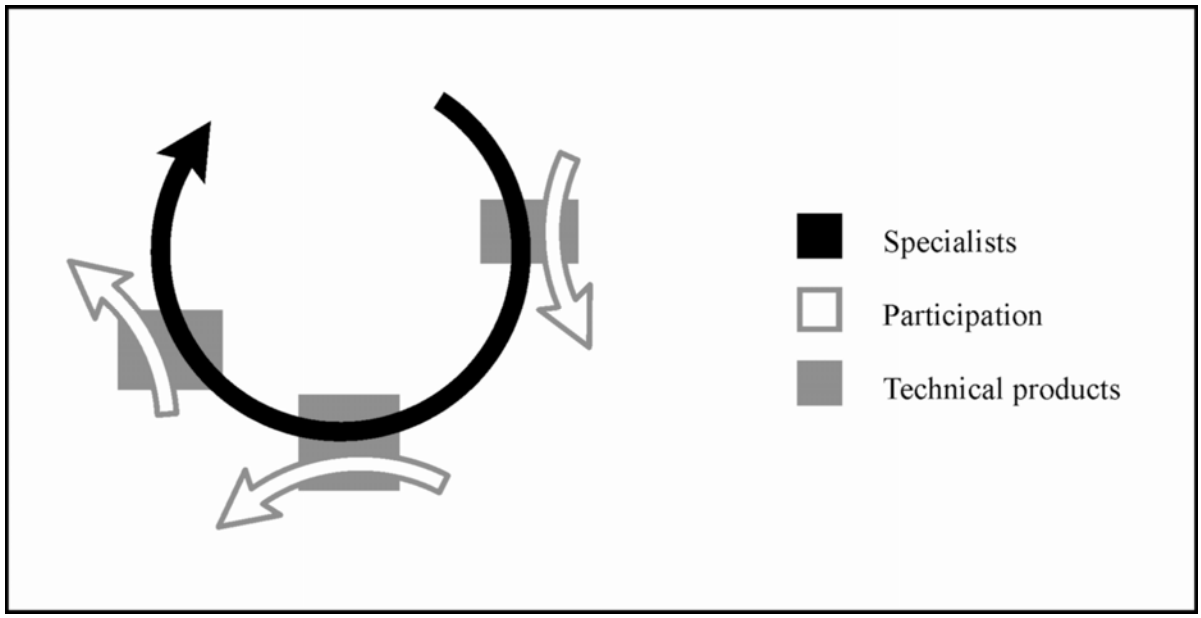

Figure 9.2: A fragmented participatory process

9.3.2 Large scale focus of policy implementation

Not only is resource allocation for implementation being driven by the most prominent 'products' of the Act, it is also being directed almost, if not entirely, at the level of statutory

structures and institutions such as CMAs, and the WMA scale. For example, though some official attention may be directed toward subcatchment structures or regions the ultimate focus of decision-making and funding is on the WMA level. Many of the research initiatives and guidelines for facilitating participation in South African WRM also focus on CMAs and WMAs. Use of this large geographic scale, and in the absence of similar processes feeding into WMA-level processes from lower levels, creates the need for events involving large numbers of people. Facilitated, inclusive group decision-making processes are almost impossible in this 'public meeting' setting (Thomas, 1995). The WMA is also usually too large for the majority of people to identify with, and the lack of a shared 'sense of place' can deter interaction with stakeholders from distant catchments or regions. An example of this is provided by the suspicion with which many Sabie-Sand stakeholders view their counterparts from the Crocodile and Komati catchments (Section 6.5.7).

9.3.3 A time of great change, uncertainty and urgency in the South African water sector

The new water policy and law have introduced a time of great change in the water sector in South Africa. As explained in Chapter 3, this has most likely led to high levels of uncertainty, and poor capacity and confidence to engage stakeholders in the novel processes of participatory resource management. In addition there are urgent social and environmental problems needing redress, accompanied by strong political pressure to do so. Urgency, uncertainty, a lack of professional and stakeholder capacity, and the challenges of strong inter-sectoral power imbalances, can all create incentives to use 'shallow' participation, tightly controlled by government.

9.3.4 Attitudes of government and practitioners

Buchy and Race (2001 p. 296) suggest that principles for 'good' participation relate "as much to attitudes or behaviours as to the allocation of specific processes or resources." Both the case studies, and comments expressed in meetings and interviews, illustrated that one of the factors that can hold processes back, from achieving more 'bottom-up', 'stakeholder-centred' participation, is the deep-rooted perceptions, attitudes and beliefs of those controlling, managing and facilitating stakeholder participation processes. It is likely that these attitudes are intensified by the high levels of change currently being experienced in South African WRM, and the confusion and uncertainty arising from these.

As Pretty (1995 p. 1252) points out, the dilemma for many authorities is that they "both need and fear people's participation". For government, and also some stakeholders (such as Irrigation Boards), come fears of lost roles, and lost control, under a new regime of decentralised and participatory management, and with new institutions such as CMAs and WMAs 'taking over' the functions previously carried out by others. For those organising participatory processes (government and their appointed consultants, many of whom are

engineering or ecological specialists), there are often fears that the involvement of stakeholders will lead to bad decisions (Smith and Wales, 1999), increased conflict (Thomas, 1995), delay (Pretty, 1995) and expense (Buchy and Race, 2001).

It is likely that the change to a new water policy has also elicited expectation and hope. Though usually considered to be more positive than fears, these can also have negative effects when expressed in the form of personal agendas. For example, the new water policy provides the opportunity, long denied under previous legal frameworks, to optimise benefits at a catchment scale, and to proactively protect the conservation status of aquatic ecosystems. This however presents the temptation for a technically and scientifically skilled team to apply their expertise to develop optimal scenarios and then use the consultation process to market these to stakeholders. Ecologists, also to some extent denied the opportunity to participate in resource management decisions in the past, and having fought to establish a strong basis for resource protection in the new water law (Palmer, pers. comm.) are likely to be eager to see these legal tools implemented, and reluctant to defer to stakeholder desires (which could dilute or compromise specialist recommendations), or the lengthy deliberations of a participatory process.

Many of these hopes and fears, and their ultimate translation into 'shallow', technocratic and product-oriented participation, relate to beliefs about the nature of WRM decisions, and the limitations of stakeholders' capacity, motives and actions, and thus their appropriate role within the WRM decision-making processes. Coote and Lenaghan (1997 p. 3) propose that there is "a widely held view among decision-makers that ordinary members of the public lack the capacity to grasp complex issues or to form views of any relevance, that they are too gullible and will believe anything they read in the popular press, that their views are inevitably shaped by narrow and selfish concerns and that they are generally apathetic and will not take the time no trouble to consider anything which does not affect them directly or personally."

I would propose that, in the South African context, the use of 'shallow', effectively 'token', processes, which downplay the role of, and need for, inter-sectoral interaction, is in part being driven by the popularity of varying degrees of the following beliefs (whether overt or not):

- Resource management decisions are about 'technical' problems that require technical or scientific solutions.
- Stakeholder perceptions and values are irrelevant to a technical problem or solution.
- Stakeholders' knowledge is not relevant, or is less trustworthy than expert or scientific knowledge.
- The benefit of involving stakeholders is to educate them, and thereby convince them not to oppose a sound technical decision.
- Differences in stakeholders' values and preferences are inevitable and unchallengeable, and conflicts are best resolved by an objective technical expert in the interests of the common good.

An alternative set of attitudes and beliefs, which can drive more 'stakeholder-centred' processes, is proposed in Section 9.4.

9.3.5 Ambivalence: Lack of clarity on the intended purpose and process of participation

The experiences of this research, particularly the meetings and interviews with government and practitioners, indicate that diverse interpretations of policy exist among members of DWAF and the practitioner community (Section 5.7; 5.8), even at the conceptual level of intentions, and thus ultimately at the level of approaches and processes. In part this can be ascribed to the scale and speed of policy change in the water sector in South Africa (MacKay, pers. comm.), and the fact that implementation aspects of the new policy are still being worked out. The ultimate result of this lack of clarity is a lack of shared understanding or common vision among those responsible for implementing the NWA. There also appears to be little awareness among practitioners of these differences in perception, with most people acting from their own assumptions (e.g. about stakeholders' and specialists' roles, 'what is negotiable?', and 'who decides?') without questioning that others may not share these, and be thinking and acting differently. These mixed interpretations translate into ambivalent public participation. As Buchy and Race (2001 p. 294) point out: "In practice differences in perception and understanding [of the purpose of participation] are often overlooked and can derail participatory processes." Poorly planned and integrated processes send mixed messages to stakeholders and create unfulfilled expectations, and ultimate disillusionment.

The core ambivalence driving this lack of clarity relates to the role of 'public participation' within the broader context of policy decision-making and ultimately within the governance of a democratic society. "Practitioners and decision makers should ask themselves whether they see participation as a means to an end or an end in itself" (Buchy and Race, 2001 p. 294). As discussed in Section 2.5.5, participation can be viewed as either 'instrumental' (a tool or methodology) or 'transformative' (a means to bring about social change), with resulting significant implications for the form this participation should take.

It is my view, based on the experiences of this research, that this clarity of intent is lacking in WRM in South Africa. Philosophical forewords to policy documents (e.g. DWAF, 2001), inspirational speeches at the start of meetings (e.g. some of the statements made about the role of stakeholders in setting a DFS for the Olifants River), vague policy statements made about the importance of participation, in educational material (e.g. DWAF, 1999b; 1999c; and the Information Pamphlet distributed to Olifants stakeholders), all operating at the broad conceptual level, seem to be preaching a model of participation almost approaching the level of 'participatory democracy'. However, the means by which to translate this ideal into actual processes in real catchments, with diverse stakeholder groupings and interests, low capacity and urgent resource and social problems, is not widely discussed or debated. At the level of the civil service, DWAF officials are generally operating with an 'instrumentalist' approach, whether consciously or otherwise. However, participating stakeholders often expect, and are sometimes even led to believe, that participation is 'transformative', offering them the power to bring about some form of social change.

A recommended response to this lack of clarity, as well as to the problems arising from 'fragmentation', 'attitudes' and 'fears', is discussed in the next section.

9.4 Driving a more 'stakeholder-centred', 'process-oriented' approach to implementing participatory Water Resource Management in South Africa: Addressing challenges of fragmentation, attitudes and ambivalence

Given the constraints outlined in the section above, how can a more enabling context and environment for the implementation of successful participation in South African WRM be created? In the following section, some recommendations toward achieving this are made. All concern, to some degree, changes in the conceptualisation of participation and its role, i.e. a change in mindset. For example, the problems of fragmentation can be addressed through re-conceptualising participation in WRM as an integrative process. Ambivalence can ultimately be overcome by clarifying the purpose of participation at the highest conceptual level. More integrated and integrative participatory processes can be achieved by teams with shared understanding and vision. Finally, more productive attitudes toward the role of participation can only be achieved by successful paradigm shifts within the South African water sector.

9.4.1 An integrative participatory process

An alternative to the fragmented participatory process described in Section 9.3.1 (Figure 9.2) is proposed in Figure 9.3, which depicts an integrative, stakeholder-centred process. This vision for a participatory governance process was to a large extent inspired by the experiences of the stakeholder workshops held in this research – and by the enthusiasm of workshop participants to both interact and act in the interests of their local resource and local communities. This experience was in direct contrast to the Inkomati proposal process (from which the workshop participants were drawn), where participants merely seemed to be looking to government to act.

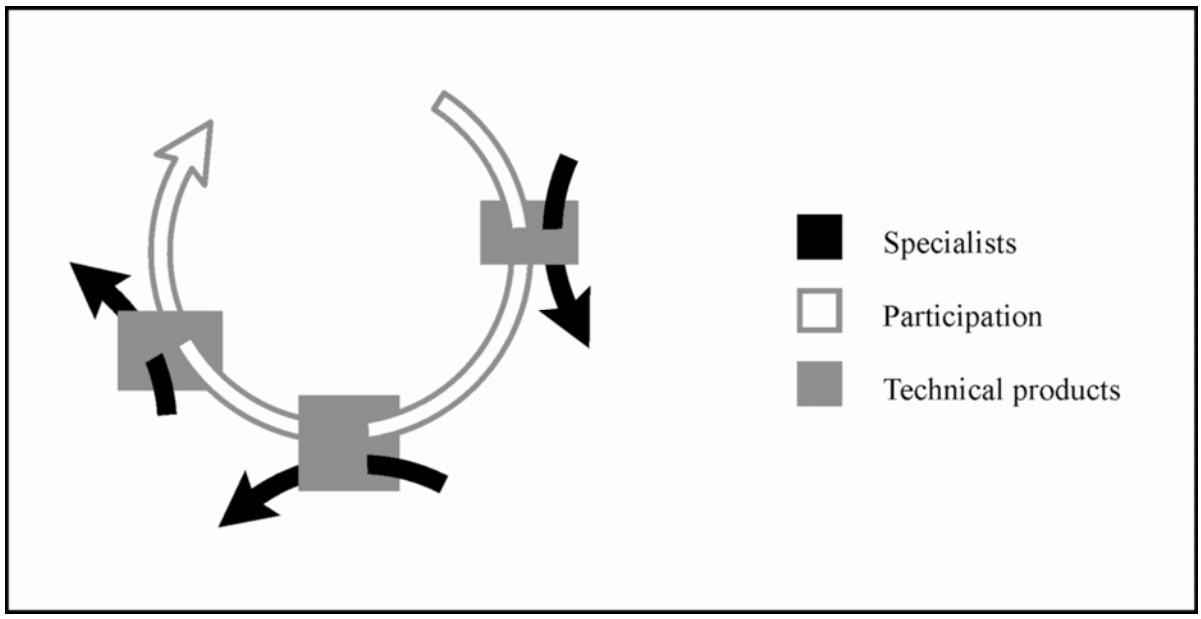

Figure 9.3: An integrative, 'stakeholder-centred' public participation process

In the idealised participatory process illustrated by Figure 9.3, the Act's requirement for statutory products and decisions is still recognised. However, these products are not interpreted as ultimate ends or achievements in themselves, which thus drive separate processes focused on the efficient delivery of a specific product, and requiring intensive inputs and ultimately control by specialists. Instead stakeholders are involved in a single, integrative participatory process, which uses inclusive, interactive discussion to build a shared understanding and knowledge of the overall resource management context. Stakeholders (as well as government and specialists) can then see the relevance of their own issues (which provide their motive for participation) within this greater context. Membership is of an ongoing, multi-sectoral group, which comes together to collaborate in identifying, understanding, and taking action on, their mutual concerns, with the help and advice of government and specialists. The scope, focus and agendas of this group are not limited by government's or specialists' requirements.

This central, integrative process needs to deliver the necessary statutory products, with the help of the relevant specialists, but also has an explicit purpose of its own. The ongoing participatory process must serve to build a genuine stakeholder management team, of people who are able to take responsibility for the effects that their actions have on the resource, and on each other. Though this central, integrative process is, by necessity, a deliberative process (relying on language and discussion), to be effective and sustainable it must also inspire action. Pretty (1995 p. 1254) proposes that the process of learning (through discussion) "leads to debate about change, and debate changes the perceptions of the actors and their readiness to contemplate action." This debate both defines "changes which would bring about improvement and seeks to motivate people to take action to implement the defined changes."

Action can include the building or strengthening of local institutions, thereby increasing people's capacity to initiate action on their own.

This level of change usually does not occur "when external experts *alone* acquire, analyse, and process information and then present this information in reports." However, the "social learning" that stakeholders "generate and internalise during the participatory planning and/or implementation of a development activity *does* enable social change" (World Bank, 1996 p. 5). Social learning leads to "social invention", in which participants design the "new practices and institutional arrangements they are willing to adopt." Involvement in this process enables participants, both as individuals and a group, to understand the new behaviours that will be needed to achieve the objectives they have set.

But for stakeholders to start taking responsibility, responsibility must first be given to them. Where technical products and processes form the focus of participation and resource management it is all too easy for specialists to take centre stage. Interactions between specialists and stakeholders are then focused on 'educating' stakeholders, or extracting very specific information about current resource use. Stakeholders are expected to learn to speak the language most understandable to the technical team, and to frame their contributions within a context most compatible with a specialist's worldview. Usually it is government or the technical team whom the process serves and stakeholders are left disillusioned and frustrated.

For participation to be sustainable and successful, however, it must ultimately be driven by stakeholders (a 'bottom-up' process as referred to by participants in the stakeholder workshops). The specialist's role is to provide information and advice to stakeholders, upon whose values, and through whose negotiation, a decision must be made. An ongoing, integrative participatory process can only be powered by mutual learning, both between specialists, managers and stakeholders, and between the different stakeholder sectors and regions. It is this new learning and understanding, and the search for common ground in designing a shared future, which builds relationships and facilitates the ongoing coevolution of perceptions and preferences.

A central focus on relationships is needed to build the social capital necessary for cooperative resource use (Pretty and Ward, 2001). The ongoing process is sustained by these relationships, and the delivery of tangible benefits of participation, for both the resource and its users. Positive relationships, common goals and a shared 'sense of place' (achieved by the use of appropriate spatial scales) are all strong 'centripetal forces' (Yaffee, 1998) encouraging cooperation in WRM at the local scale.

9.4.2 Addressing ambivalence at the highest level: Clarifying the role of an ongoing, integrative participatory process in governance and democracy

Because the focus of the 'integrative participatory process' described above is to achieve outcomes through the actions of stakeholders, not government, to some extent it can operate

regardless of the degree of power-sharing with stakeholders which government intends. However, where this ongoing process intersects with statutory decision-making, and ultimately also in its effectiveness as a 'transformative' participatory process, the success (and sustainability) of an integrative, 'bottom-up' process for participation is limited by the power and influence afforded it by the 'top' (the elected and appointed authorities of a representative democracy).

In Section 9.3, 'ambivalence' was identified as a factor potentially driving the use of shallow participation, inconsistent and poorly integrated processes, and ultimately unfulfilled stakeholder expectations. This lack of clarity ultimately concerns whether stakeholder participation is, or should be, 'instrumental' or 'transformative' (Buchy and Race, 2001) in WRM in South Africa. It is imperative that both national government and DWAF should engage in, and resolve, the debate on this issue, in a way that creates and communicates a common vision for the role of participation, and stakeholders, to all relevant staff, consultants and stakeholders. This debate should entertain the following questions:

- What are participatory WRM decisions about? (Knowledge/needs/values?)
- What and who is relevant to these decisions? (Whose knowledge/needs/values?)
- What is negotiable? Who decides?
- What benefits should participation bring? For government, for stakeholders, and for specialists?
- What is the stakeholders' role? How much influence should they have?
- What are the roles of specialists and government?
- What outcomes and benefits of participation does policy intend to achieve?

The ultimate question concerns the role of participation, and therein the power or influence which participants should have, in challenging the authorities of representative democracy. As the following authors suggest:

- "Participation without power is an empty notion" (Cock, 1994 p. 23).
- "If the participation of previously marginalised citizens does not have an impact then DIPs will be seen as 'a democratic drama that has no functional consequence'" (Hampton, 1999 p. 169 in Holmes and Scoones, 2000 p. 30).
- "With direct compensation [for participation] seldom available to induce or reward involvement, other incentives are essential and the promise of influence is usually a minimum" (Thomas, 1995 p. 40).
- "Power is a major reason why people decide to get involved in natural resource management issues, while at the same time government agencies may be reluctant to relinquish their control over resource management" (Buchy and Race, 2001 p. 294).

The National Water Act states that the ultimate 'power', in the form of decision-making authority, lies with government (the Minister of Water Affairs and Forestry) and this power cannot be contested. However, accepting that there can be no 'power-sharing' with stakeholders in a strictly legal sense, as the above quotes reflect, participation is all about power. There are ways of sharing influence if not authority, without which participation is meaningless, and offers no incentives or benefits to stakeholders motivating their participation.

Officials conducting participatory processes should carefully guard against perceptions of 'tokenism'. Brunson (1998 p. 83) argues that resource managers undertaking collaborative initiatives with stakeholders must be "sensitive to the defensive instincts of all participants". This requires managers to follow "norms of procedural justice" and to share authority "even when one is politically or legally empowered to impose one's will on others."

Sharing power in participatory processes can best be achieved through creating effective linkages between the outcomes of participation and the broader policy making processes of representative democracy. If a substantial number and variety of stakeholders are able to reach agreement on a vision and strategy for the management of their local water resources, this consensus should carry weight at various levels of statutory authority.

Ultimately, the success of a representative democracy rests on the quality of citizen participation in the political process (Thomas, 1995; Webler and Renn, 1995), and this participation should not be understood to be limited to the act of voting once every five years: "citizen engagement forms part of an ongoing critical dialogue upon which more legitimate forms of political authority can be grounded" (Smith and Wales, 1999 p. 298). For example, Webler and Renn suggest that both Rousseau's (1968 [1762]) and John Stuart Mill's (1873) theories of democracy have at their core a belief that the "moral and intellectual growth" of citizens takes place through their participation in political affairs. "People 'learn democracy' by becoming engaged in its workings. The result of the learning experience is an awakening to the realization that the public and private interests are linked" (Webler and Renn, 1995 p. 22).

Accepting that influential 'public participation' does not demand a 'participatory democracy' context, Holmes and Scoones (2000 p. 10) propose the following conceptualisation of the interface between participatory processes and representative democracy. Deliberative participatory processes are potentially an "element of the 'soft infrastructure' – the institutional capacity building and mutual learning where social collaboration and invention occurs". This 'soft infrastructure' operates in parallel to, but nevertheless has the capacity to transform, what Holmes and Scoones refer to as "the 'hard infrastructure' of the established government institutions (e.g. Parliament), social institutions (e.g. education systems) and regulatory institutions (e.g. the law). Thus, a mature and effective participatory resource management process should ultimately be able to change its own policy context, through influencing the parameters within which it operates. This is a level of maturity to which South African WRM governance can potentially aspire.

9.4.3 Implementing more integrated participatory processes through more integrated multi-disciplinary project teams

Achieving more integrated and less ambivalent participatory processes will require more detailed planning of participation, within, and as an integral part of, the overall resource management process, than appears to have taken place in the case studies of current

implementation practices. This planning must include some consideration of future monitoring and evaluation, to enable a reflective and adaptive process, to learn from experience and to transfer this learning to other catchments. As the inconsistent communication to stakeholders about their role in the Olifants Reserve Determination process illustrated, a strategy is also needed to manage participants' expectations. The limits of stakeholders' influence need to be made explicit. (However, managing expectations does not imply the elimination of all expectations – this will also eliminate any incentive for participation).

The achievement of greater integration requires that the team members managing a particular process have a shared vision for the outcomes and process of participation. Achieving this entails the development of multi-disciplinary teams with shared purpose. As Pretty (1995 p. 1254) points out: "simply putting together a group of people in the same place" is not enough to make an effective team. "Shared perceptions, essential for group or community action, have to be negotiated and tested." Ideally, team members should be selected for their suitability for multi-disciplinary work, and for interacting with a range of 'non-scientific' stakeholders. "Typically, normal professionals have a background in a single discipline, work largely in ways remote from people, are insensitive to diversity of context, and are concerned with themselves generating and transferring technologies. Their beliefs about people's conditions and priorities often differ from people's own views" (Pretty, 1995 p. 1258). Instead Pretty recommends the development of a 'new professionalism' suited to engaging a more pluralistic working environment. "The new professionals … make explicit their underlying values, select methodologies to suit needs, are more multidisciplinary and work closely with other disciplines, and are not intimidated by the complexities and uncertainties of dialogue and action with a wide range of non-scientific people" (p. 1258).

Similarly, the DWAF staff appointed to oversee participatory processes should be carefully selected, and trained, for this purpose: As Thomas (1995 p. 179) explains: "Managers who are accustomed to working in traditional, relatively insulated managerial roles may be ill-suited to become people-oriented facilitators". Individuals who are "task motivated" may not be able to develop the "relationship-motivated" approach (Thomas, 1995 p. 179) which participatory processes require.

9.4.4 Changing attitudes through 'paradigm' shifts

One of the factors hindering implementation of the principles of the new water policy is the persistence of mindsets and attitudes rooted in past approaches to governance and resource management in South Africa (Rogers *et al.*, 2000) and elsewhere. Throughout this study certain concepts or 'position statements' repeatedly emerged as factors affirming the transition to a more participatory, equitable and integrated WRM approach. It is my belief that agreement on the following conceptualisations of a future participatory WRM system and process could go a long way toward dealing with the attitudes, fears and ambivalence potentially driving 'shallow', 'top-down' participation:

The ecosystem is the resource, not 'water' (DWAF, 1999a; MacKay, 2003):

- Water for abstractive use is merely one of a suite of goods and services provided by aquatic ecosystems. This conceptualisation broadens the scope of WRM, of what and who is relevant to WRM decisions, and of who benefits and who bears the costs of resource use. This enables a holistic approach to achieving greater sustainability and equity of water resource use.

Determining a Desired Future State is a distributive, value-based decision:

- The DFS (and the Ecological Reserve set to achieve it) is about the distribution of both the costs and benefits of the use and protection of a resource, and about the delivery of ecosystem goods and services.
- The DFS and resource allocation decisions are distributive, multi-criteria decisions that cannot be optimised (Arrow and Raynaud, 1986; Wondolleck and Yaffee, 2000).
- Participants' initial preferences for the outcome of this decision are not necessarily fixed (Costanza and Folke, 1997; Smith and Wales, 1999) and most likely will need to change if there is to be agreement on the final decision.

Water resource management, although dependent on science and engineering, is a social process (Rhoads et al., 1999):

- Achieving equitable resource management decisions, and ensuring their successful implementation, is a social process, involving stakeholders' needs and values, and cannot be done by experts acting alone.

Expert knowledge and values are not privileged:

- There is a danger, particularly in decisions requiring experts' input, that these experts may "implicitly privilege their own knowledge, yet at the same time be ignorant of or insensitive to the place-based knowledge of non-scientist stakeholders" (Rhoads *et al*., 1999 p. 298). Worse yet, scientists may "fail to distinguish clearly between their knowledge and their values, and, in fact, convey the impression that their values derive directly from their knowledge." This can lead scientists to presume that "their values also are privileged" (Rhoads *et al*., 1999 p. 298). This outlook is enhanced in participatory processes that focus on the role of specialists, and downplay the role of stakeholders. Instead it should be recognised that stakeholders have knowledge about the resource relevant to the technical process. Stakeholders are also uniquely expert on their needs and values, and on what they are "willing to change, to what extent, and how" (World Bank, 1996 p. 142).

The purpose of participation is not to educate stakeholders but to facilitate mutual learning by all:

- Capacity building is not about teaching stakeholders to understand ecologists and engineers. All role-players need to build the capacity of a common understanding. Government and specialists are able to offer stakeholders information about technical and policy issues, and how they can best use the administrative system to address their

needs. Stakeholders are able to offer invaluable information about their resource, how it is used, how it is able to meet their needs and values, and how they would like this to happen in the future. It is the experts who will need to make the translation between physical or ecological variables and parameters of more relevance and meaning to stakeholders, and not vice versa. Ecosystem 'goods and services' offer a valuable common language and currency for achieving this.

9.4.5 Summary: Driving deeper, integrative, 'stakeholder-centred' public participation in South African WRM

In order to achieve the deeper benefits of participation, and ultimately greater equity and sustainability of water resource use, those directing participation in WRM in South Africa should aim for deeper participation than case studies have illustrated thus far, in which stakeholders have real influence over decisions, and are actively involved in implementing them. This approach should preferably involve participation in an ongoing deliberative process, and not in once-off events designed to deliver specific statutory products. Ultimately, mechanisms, even if informal, must be created to connect this process, or at least the issues, values, needs, frustrations, ethics, visions and agreements which are expressed, to the broader governance processes of representative democracy. Participation must be recognised as a legitimate component of the 'cooperative governance' that the Constitution demands. Government then has a responsibility to support the growth of 'bottom-up' initiatives, and to create channels, structures and processes that allow them to interface with 'top-down' governance, at a variety of levels.

Achieving more coordinated and integrated participation requires that those conducting participatory processes have a shared vision for the intent and purpose of participation. This vision must reflect the key paradigm shifts brought about by the new water policy: a holistic view of water resources, their use and management, and the central role of stakeholder needs, values and knowledge in achieving effective WRM decisions. However, practical implementation of this ideal in South African WRM faces a number of challenges, or tensions. In the following section the most important of these are discussed and some practical interventions suggested.

9.5 Dealing with specific challenges, particularly relevant to the South African WRM context

There are a number of challenges that the South African WRM context provides to the achievement of equity and sustainability through the use of participatory processes. These challenges are not unique to South Africa, and essentially derive from inherent tensions, or paradoxes (Cortner and Moote, 1999), in the process and outcome of participation, and its ultimate role within governance. The aim of the following discussion is primarily to highlight

these challenges and the precautionary measures needed to *begin* to deal with them. The need to develop more comprehensive strategies for addressing these challenges (and managing these inevitable tensions of participatory governance) can provide an important motive and focus for future research in this field.

The following tensions will require special attention in South African participatory practice: devolving power through participation while dealing with power imbalances between participating stakeholders; balancing the demands for a fair process, with the need for quality decision outcomes; addressing the need for both depth and breadth of participation through accountable and efficient representation.

9.5.1 Power imbalances

As discussed in Chapter 2 (Section 2.8), power imbalances are a major challenge and constraint to the success of participatory processes. This was demonstrated in the Inkomati and Olifants case studies, in which power imbalances played a role in realising inequitable outcomes and contributions between different stakeholder groups. It is conceivable that, in an intensely divided society, concerns about the effects of power imbalances can potentially lead authorities to employ shallow participation, in which government effectively represents the interests of less empowered, marginalised stakeholders and thereby protects these interests from domination by stronger players in participatory arenas.

However, if this intervention denies disadvantaged stakeholders their own voice, it can further disempower them. Tightly controlled – 'token' or "stage-managed" (Pretty, 1995 p. 1252) – processes do not achieve ownership of the process and product of participation, thus both weaker and stronger players may not honour the decisions that are reached. The challenge is therefore to put in place participatory processes that are able to deal with these power imbalances, and at the same time inspire ownership by all participating stakeholders.

The first step is to recognise, and not ignore, the existence of power imbalances between different stakeholder groups. It is also important to understand what aspects of their capacity are limiting a group's participation. "Some groups – especially the very poor, women, indigenous people, or others who may not be fully mobilized – may not have the organizational or financial wherewithal to participate effectively" (World Bank, 1996 p. 132). Other imbalances result from a "disequilibrium of power, prestige, wealth, and knowledge".

The design and facilitation of participatory processes can either enhance or counteract the effects of these power imbalances. Skilled facilitation can diminish power differences through the use of participatory techniques to promote 'level' interactions (World Bank, 1996). Some of these techniques are as follows:

- *Small working groups:*
  Small groups are able to reduce the domination of discussion by particular individuals (Dienel, 1989; Crosby, 1995; World Bank, 1996).

- *Rules of conduct:*
  'Behavioural rules' monitored by facilitators are essential to ensure an atmosphere of mutual respect, and that all participants are able to speak, and be listened to, without criticism or opposition (World Bank, 1996; Smith and Wales, 1999). These rules can be introduced by the facilitator or designed by the group itself at the start of the process.
- *Role playing exercises:*
  These can help to sensitise stakeholders, particularly the more powerful individuals, to the lives that others lead (World Bank, 1996).

Other issues to consider in addressing the challenge of power imbalances in participatory processes are: achieving true inclusivity; the role played by agendas in limiting equitable participation; the potential for misuse of 'consensus' as a requirement for participatory decision-making.

Attention to all aspects of inclusivity

In the evaluation framework for participatory processes used in this study, a broad view of inclusivity was proposed – as extending beyond the representivity of stakeholder attendance at meetings, to include the processes by which participants take part, and the agendas they are allowed to discuss (Bloomfield *et al.*, 1998 in Holmes and Scoones, 2000).

An inclusive process must pay attention to the access all interest groups have to the process – through consideration of issues such as how people find out about the opportunity to participate, how accessible venues are to public transport, and what implications the chosen times for meetings have for different representatives (Buchy and Race, 2001). The accessibility of the content of discussions and documents to all participants must also be considered. As Khan (unpubl. p. 2), in an assessment of a participatory process in an impoverished community in the Western Cape, points out: "Too often techniques more suited to a 'first world' approach are applied indiscriminately in poor communities … [for example] … public documents written in academic or scientific jargon; public meetings held in inaccessible venues or at inconvenient times; public meetings conducted in a language not commonly understood by local communities; and public meetings in which the official proceedings are dominated by academic or scientific jargon not easily understood by the general public." Khan (p. 2) goes on to recommend that: "Inappropriate public participation techniques are extremely harmful, often either intimidating or antagonising the very communities they are attempting to involve." This offers a strong warning to those undertaking public participation for South African WRM.

Constraining participation through agendas

Another, fundamental, aspect of inclusivity relates to the agendas participants are permitted to discuss. Power imbalances can be enhanced by the coincidence of some interest groups' concerns with the narrow agendas set by governments for product-oriented processes.

As Bloomfield *et al.* (1998 p. 11 in Holmes and Scoones, 2000 p. 39) argue: "power lies substantially with those who decide where the boundaries are drawn". Because participatory processes are usually initiated by government, there is a risk that government can frame (and thereby constrain and control) people's participation. Through their choice of subject area, or by defining the 'problem' in a certain way, government can establish a "particular policy discourse where there is little opportunity to challenge the assumptions behind the issues that are being addressed and so recast the questions" (Holmes and Scoones, 2000 p. 40), what Hildyard *et al.* (1998 p. 3) refer to as 'top-down planning … imposed from the bottom-up". Public participation processes can then be used as "political neutralisers", "sanitising the political process by removing possibilities of conflict and masking the unpleasantness of clashes between different interests to consolidate state legitimacy and authority" (Cochrane, 1996 p. 205). The degree to which this is a concern is to some extent determined by the relative alignment of government's and citizens' priorities, and thus the legitimacy and efficacy of representative democratic structures. Allowing for broader and more flexible agendas, involving stakeholders from the earliest stages of a policy process, and allowing them to influence and prioritise the scope and agenda for their own participation, are all means to address this concern.

However, broadening the scope of participatory processes can cause other problems, as participants often raise issues which are outside the remit of the organising agency, in which case "all that can be done is to pass on the results to others in the hope (almost always unfulfilled) that they will deal with them" (Holmes and Scoones, 2000 p. 41). Similarly, participants can introduce into the debate "wider questions of ethics and values, linked to debates around rights, justice and morality." However, this information often "cannot be accommodated by bureaucratic processes (Holmes and Scoones, 2000 p. 43) and is therefore ignored by decision makers. The only solution to challenges such as these (Holmes and Scoones, 2000) is to effectively link participation to the broader political process (Section 9.4.2).

Consensus as coercion

As discussed in Chapter 2 (Section 2.8), the requirement for 'consensus' in participatory decision-making processes is viewed by some as coercive (Both Ends, 2000). However, this perception most likely results through misuse or misunderstanding of 'consensus' as merely referring to a product (unanimity), separated from the very specific qualities of its process. Insisting on consensual agreement without following a consensual process will most likely

favour the interests of the most dominant individuals in a participatory process, thus exacerbating existing power imbalances and entrenching inequality. The requirement for consensus (as vaguely stated in the NWA) should thus not be used to suppress conflict, or the expression of diverse views. It should also not be used to apply pressure on a group to reach a quick decision (usually best achieved by withholding opposition to the first suggested 'solution' to the 'problem').

9.5.2 Ensuring decision quality, sustainability, and equity

In this thesis I have proposed the superiority of a process-oriented approach to conducting participatory decision-making processes. However, one of the criticisms of process-oriented approaches is that they focus on process to the neglect of outcomes, and therefore the neglect of the quality of the decisions reached (Gardner, 1989; Brueckner, 2002).

Where decisions concern levels of resource protection, poor decision quality can threaten sustainability, a major concern in participatory WRM. Similarly, where outcomes concern the distribution of resources, equity is a quality criterion for an acceptable decision. Attention to a fair process is however less likely to achieve sustainability than equity, due to the interests of the environment and the 'public good' being more difficult to adequately represent.

It is likely that the only way to ensure decision quality with regard to sustainability, and ecological values, is to set limits of negotiability, and thus to have 'outcome' standards as well as 'process' standards for participation, what Wondolleck and Yaffee (2000 p. 241) refer to as "bounding the decision space". For example, the Reserve determination process has limits for the setting of desired future Management Classes below a 'D'. As Thomas (1995 p. 172) points out: "Sharing of authority does not mean that all aspects of the issue must be open to public scrutiny…. all public decisions come with quality requirements." However, managers must specify at the start of a process what these constraints are: "public managers have often failed to define their quality requirements before public involvement is initiated; yet waiting until later can result in citizens' feeling misled about their role, perhaps undermining the viability of the entire involvement process" (Thomas, 1995 p. 172).

9.5.3 Representation

The nature of stakeholder representation is closely linked to issues of legitimacy and accountability, and is therefore critical in participatory decision-making processes (Holmes and Scoones, 2000). In this study the challenge of representation was identified in the workshops and case studies, meetings and interviews. Stakeholders, practitioners and government officials expressed concerns about representation, the accountability and capacity of representatives, and the influence of these issues on the legitimacy of participatory decision-making processes.

One of the central issues raised was that of scale, and the large geographic scale of participatory decisions at the level of entire WMAs. This also affects accountability, through a lack of feedback and communication between representatives and their constituencies, in part due to unrealistic expectations given the scale of representation imposed. This problem was particularly evident for the Olifants case study, in which a small number of participants were expected to provide written feedback on the specific preferences of 'communities' spanning a vast area, number and diversity of stakeholders.

The problem of achieving effective, efficient and legitimate representation can potentially only be resolved over the longer term; the necessary trade-off between depth and breadth of representation could only be successfully dealt with through a tiered participatory process, involving functional group sizes at a variety of spatial levels. Setting up such a tiered system would be a resource intensive process, and would need to evolve over time, drawing on the resources and motivation of stakeholders themselves. To facilitate the development of these lower levels of organisation and communication, DWAF will need to broaden its currently almost exclusive focus on statutory scales and groups, and at the same time be sensitive to the potential for ignoring and frustrating informal processes, such as catchment forums. These non-statutory groups (such as the Sabie River Working Group in the Inkomati WMA, and the Olifants River Forum) have essentially played the role of CMCs and CMAs in the past, through voluntary and informal, yet relatively successful, multi-stakeholder, inter-sectoral and inter-regional agreements. Organisations such as these represent a valuable source of social capital, which the new statutory structures should seek to build on, rather than sideline or destroy. Achieving this may require DWAF to direct some resources toward informal and subcatchment structures and processes, and thus the broader process of engagement. Neglecting to invest in processes below the WMA scale will ultimately result in resources for advancing 'participation' being used merely to empower and enrich only a few 'professional representatives' who by virtue of their new livelihoods may have little or no further connection with, or impact on, the resource.

Creating accountable representation

A second problem identified by participants in this study (stakeholders, government and practitioners) was the challenge of ensuring accountability in representatives. Addressing this challenge, again over the longer term, will require that those organising participatory processes take an interest in what happens both inside, and outside, of these processes, essentially through some form of monitoring and evaluation system. Roles and responsibilities of representation will need to be clarified, and expectations created for feedback and action. Resources and training may need to be made available to improve the capacity of representatives to meet these expectations. In order to adequately access the views, and inspire the actions, of those 'on the ground', representatives' role should be defined as 'speaking with their constituents, not for them' (Susskind and Cruikshank, 1987), or to 'act for' not 'stand for' their communities (Rossi, 1997).

9.6 A focus for future research

The overall purpose of this research was described in the introduction and approach to this study as 'exploratory'. Exploratory research is intended to generate ideas and develop tentative theories (Neumann, 1996), and identify variables, hypotheses and questions for more focused future research (Marshall and Rossman, 1995). The challenges identified in the sections above (power imbalances; balancing the need for procedural fairness and quality decisions; achieving accountable and efficient representation) can provide such a focus, and must certainly inform any future research initiatives, as they are likely to be key factors determining the success of participation in South African WRM.

Exploratory, qualitative research is also intended to 'uncover the unexpected' (Marshall and Rossman, 1995). To a large extent it was imagined at the outset of this study that Objective 3 ('principles and processes of successful public participation'), and thereby the focus of this study, would ultimately come to rest on specific facilitation techniques (i.e. the very practical, localised expression of the concept of 'public participation'). However, the revelations of this study suggested that (for the moment) the greatest influence on the success of public participation in WRM in South Africa is at a far broader conceptual level, and within the less tangible realm of beliefs, paradigms and attitudes – in particular, the lack of clarity about the highest goals of participation in a fledgling democracy. This broad conceptualisation of 'public participation' and its goals also provides useful subject matter for future WRM research in this country.

In the light of these insights, the following conclusion presents a personal vision for the future focus and emphasis of practice and research in South African WRM.

9.7 Conclusion: A vision for the future of participatory WRM in South Africa

It is my recommendation, based on this study, that an integrative, process-oriented approach, to managing and facilitating stakeholder participation, is a means to access the deeper benefits of participation desired by South Africa's new water policy and law.

This integrative process is characterised by: a holistic approach; attention to inclusivity, and balancing power; a focus on social processes, rather than technical or legal products. The process is based on mutual learning, but is not complete unless it inspires taking responsibility and taking action. Sustainable, consensus-based participatory decision-making is facilitated in a process which: (1) builds shared context, (2) prioritises inter-sectoral interaction and relationships, and (3) strives for mutual understanding, leading to the coevolution of perspectives and preferences toward a shared vision and strategy for action.

However, achieving this required extent and depth of participation in South African WRM is constrained by the attitudes and emotions of those initiating and controlling participatory processes, and the persistence of old ways of thinking about water resources and their effective management. A comprehensive strategy is therefore required to communicate and internalise the paradigm shifts that the new water policy (and current trends in approaches to natural resource management and governance worldwide (Cortner and Moote, 1999; Wondolleck and Yaffee, 2000)) have brought about.

To a large extent, attitudes (on behalf of government and their appointed consultants) are more important than actions; because ultimately there is only so much that government can and should do. By definition, a 'bottom-up' approach must be driven by the 'bottom'. The question then becomes not "how can government implement a 'bottom-up' approach", but "how does the 'top' facilitate the initiative, leadership, and capacity of the 'bottom' – i.e. water resource users and their representative structures?" Government's role is then to create a 'space' for 'bottom-up' engagement, and to clearly define and communicate the boundaries of that space.

Government-initiated participation and even consultation processes provide this space, and the impetus for the development of more 'organic' stakeholder initiatives. The manners in which these processes are conducted, and the outcomes they are able to achieve, are crucial to whether this experience is able to inspire or frustrate stakeholder involvement.

The most efficient way in which participatory processes can provide more incentives and benefits to stakeholder engagement is through greater integration and holism in framing the scope of the participatory process. WRM is taking place within a complex and dynamic social and political context (which includes issues such as the economy, land reform, and changing institutions for local governance). Stakeholders' lives – unlike legislation and the functions of different government departments – are integrated, and they experience livelihood issues as a whole. Those conducting processes which use the term 'water' must realise that they are dealing with a concept and term which invokes strong needs, values, emotions and expectations. This presents challenges, but also offers an opportunity. There is potential to harness the importance people attach to water to inspire them toward positive engagement of government, and each other, and to perceive benefits to participation and cooperation, in the management of their shared resources.

Finally, there is a need to recognise that the ideals of equity and sustainability are linked. Repeatedly telling previously disadvantaged stakeholders to 'wait for the Reserve' (for an unspecified and potentially lengthy period of time) has considerable potential to create lasting negative perceptions of the resource protection aspects of the new water policy, in those currently, and previously, denied access to the resource. A collaboration of government, specialists and current resource users is necessary to find ways, within the constraints of the NWA, to address the most urgent allocations required for the redress of past imbalances.

Ultimately, it must be recognised that, though DWAF is structured, funded and mandated to implement the NWA, there is only so much that a national policy and law can ever achieve. Resource management is about managing people, not resources (Berkes and Folke, 2000). Successful participation, which is able to create empathy, understanding and cooperation, among the interdependent beneficiaries of a shared resource, is the only means to access the considerable potential of ordinary water resource users to achieve “some for all forever”.

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